The Delaware Grape.

THE close of the year we propose to signalize by putting upon record our estimate of the Delaware Grape, not ostentatiously, but in few and simple words, and where all may see it. Our opinion of the Delaware, indeed, has been pretty well made up for five years past; but having been requested by friends who differ from us to give the subject another season's consideration, and examine the vine under a variety of soils and locations, we consented to do so, and the result has made us firmer in our faith. Some three years since, in a Fruit Committee report, we pronounced the Delaware the "King of the Natives," which expression did not seem to please the officers of the institute for whom we acted, and one exhibiter threatened never to exhibit again if such things were allowed! It is a matter of congratulation, however, that the world will move without such men, and notwithstanding all their efforts to impede its progress.

We wished to form our estimate of the Delaware as a grape adapted for *general cultivation*, and accordingly put ourself in communication with intelligent grape-growers in various sections of the country, avoiding mostly those engaged in the sale of plants; and the result has been a singular unanimity in regard to the character and hardiness of the grape, wherever it is grown. Our own experience has been, that it is perfectly hardy and very productive, and this experience has been confirmed by a personal examination extending over a considerable extent of country. But let us be a little more precise in regard to its hardiness, as this is a very important point. Throughout the Middle States the point seems to be generally conceded, the exceptions, so far as we can learn, being confined to weak young plants. The north-west, however, would seem to be the point where its hardiness would be put to the severest test. From this point, the testimony, fortunately, is favorable, and the Delaware, in this respect, takes rank with the hardiest. The testimony, it may be added, is not precisely uniform, but it is so general, that the exceptions may fairly be referred to causes extrinsic to the hardiness of the vine itself. The simple truth is, that the Delaware, in the process of propagation, has been manipulated to a degree that would have destroyed the principle of vitality in almost any other known variety; but this, we have reason to believe, will prove to be only a temporary inconvenience in the Delaware, such is its constitutional vigor. On the whole, we are warranted in concluding that the Delaware is adapted to the western and north-western sections of our country, to the degree at least to which the grape is now cultivated.

In regard to the South, there can be no doubt, as respects either its hardiness of its fitness, for it is grown there in the greatest perfection, as we have had good reason to know during the past season. There can be little doubt, moreover, in regard to the New England States, to a part of which we have given a personal examination; and we have testimony from Maine, New Hampshire, and Vermont, all in its favor. In regard to its hardiness, therefore, we think we are warranted in saying that the Delaware is adapted to *general cultivation*.

The next point we shall examine is its *vigor*. It has been objected to the Delaware by some, that it is a weak grower, producing only small and slender shoots. That it is often found making a slender growth is not denied; but this is sufficiently accounted for by the manner in which it has been propagated, and by improper planting. In the course of a couple of years it recovers its vigor, and grows as well as the Catawba or Isabella, and, in our own experience, much better. But even with its present tenuity it will make a good growth the first season, when judiciously and carefully planted. We have directed the planting of a considerable number during the past season; the plants were mostly eyes one year old, and the growth has been from four to six feet of good wood about a quarter of an inch in diameter; in some cases the growth has considerably exceeded this. In many instances of failure, the ground has been badly prepared, and the vines carelessly planted; where these points have been attended to, the result, so far as we know, has been entirely satisfactory. We have seen vines four and five years old, in thoroughly prepared ground, where the growth has been quite equal to that of the Isabella of the same age. Judging, then, from what we have seen, and from our own experience, we must conclude that the Delaware is unexceptionable in point of constitutional vigor.

As intimately connected with this point, we shall next allude to the charge of *mildew*, to which, it is said, the Delaware is *peculiarly* liable. We have given no inconsiderable share of attention to this point, as pertaining to the vine generally; and we are compelled to say, that all vines, under certain conditions, are more or less liable to some form of it. Without anticipating a subject which we shall at some future time treat specially, we may as well here state our conviction, that the mildew, so called, will, as the number of vineyards increase, constitute one of the most formidable enemies with which the vine-grower will have to contend; and it is well that he should know it, and prepare himself for it. The past season has been one in which the mildew has prevailed to a greater extent than we have ever known it before; probably none of our native vines have been entirely free from it in some locality or other. According to our observation, no special charge can be made against the Delaware in this respect; on the contrary, where found growing promiscuously with other kinds, it has, in many cases, formed an exception. On the whole, we sum up by deciding that the charge against the Delaware of being *specially* liable to mildew, is not sustained.

The next point to which we shall direct our attention is that of *fruitfulness*. It has been urged by some as a serious objection to the Delaware, that it is not productive, and that the bunches and berries are very small. In regard to this, we presume that no intelligent vine-grower will claim that any vine that has been propagated to the extent that the Delaware has, or, indeed, any young vine, will in its early stages give any just indication of its maximum productiveness. Age is necessary to the vine, in order that it may yield it best results. We are inclined to believe that the Delaware has been underrated, in this respect, by a great many. It must be admitted that the bunches and berries are small, though not as small as some have supposed. In vines that have attained to the age of five years, the bunches approach what is called medium size; but in weight of fruit from a given surface or number of vines, the Delaware surpasses both the Isabella and Catawba. A Delaware vine in full bearing is, indeed, a beautiful sight; one that we have never seen equalled among all our native grapes. In view of these

facts, we can not consider the size of the Delaware a serious objection to it; still we can not help sympathizing with those who wish that the bunches and berries were both larger.

We shall next pass to the point of its *nativity*, which has been the source of a prolonged and warm controversy. As before stated, we have deferred publishing our opinion of the Delaware in these pages out of deference to friends who had requested us to examine it during another season. We have done so, and we are more than ever confirmed in the opinion expressed several years ago, that the Delaware is a native. With such testimony as we have before us, we can arrive at no other conclusion. If we ever had a doubt lingering in our mind, it has been dissipated by an examination of the seedlings raised from the Delaware. We can not go into an examination of our reasons here, as this article already exceeds the length we have assigned to our leaders; but we shall do so in a separate article. We may state briefly here, however, that our opinion has been arrived at from the fact that many of the seedlings of the Delaware show unmistakable evidence of reverting back to the native (American) type, especially in the texture and pubescence of the leaves; that the hardiness, habit, foliage, &c., of the Delaware itself indicate a native origin; that the peculiar division of the pulp and skin, as found in the Delaware, is characteristic of our native grapes; that it has traces of the peculiar aroma of the native grape, &c., &c. We believe that the Delaware is of the same parentage as the Catawba, and that the Diana is a connecting link between them, the last and the Delaware having not a few points in common. It was sought at one time to identify the Delaware with the Red Traminer, but this, we believe, has been abandoned, since they are quite distinct from each other in wood, foliage, and fruit. Some of our friends will not agree with us, probably, in our opinion of the nativity of the Delaware; but we can differ from them, we trust, without impairing our respect for their honest convictions.

Our last point relates to *quality*, and here, with a very few exceptions, all opposition to the Delaware fairly breaks down. It ought to be considered an impeachment of a man's good taste to doubt its excellence. We want a class of grapes of the first excellence, productive, and so hardy as to be suited for cultivation in all sections of the country; and the Delaware, in our opinion, possesses these requirements to a greater degree than any other grape that we have. For this reason we shall adopt it as the *standard of excellence* by which to judge all new comers. It possesses the merit of being not only our best table grape, but also the best for wine, in the estimation of such men as Messrs. Mottier, Schnicke, and others, whose testimony to this effect we shall soon lay before our readers. It is pleasant to find the great mass agreed on one point at least in regard to the Delaware. Its melting tenderness, its delicious sweetness, and its delicate vinous spirit, gladden the heart of all who eat it. We claim for it the merit of being the first American grape to truly educate and form the public taste. But it may be said that all do not consider it equally good; we know there are some who, without denying its high qualities, think that it has been overestimated. Its excellence has certainly been lauded in exalted terms, and we must confess that we delight to sing its praises. It carries us a long way up the classic mount, and makes us familiar with such food as the Olympians may be supposed to have delighted in. With it we can be content till another shall give us a taste of something more celestial.

FORWARDING LETTUCE IN COLD FRAMES.

BY PETER HENDERSON, JERSEY CITY.

Mr. Editor :—I sent a paper on this subject to an agricultural journal some years ago, but our experience since has enabled us to improve somewhat on our practice at that time ; and, besides, the Horticulturist goes among a class of readers whose interest is more direct in such matters than those of the journal referred to, which may excuse me for again giving our experience.

The forwarding of Lettuce in cold frames, like all other products raised for market, has been much simplified of late years, by the necessities of the parties engaged in the business ; together with the yearly increase of sharp competition, which compels us to get at the quickest and cheapest method of obtaining the desired result.

The first object is to select a dry and sheltered spot for the frame yard, which should be inclosed on the north and west sides by a board fence six feet high. The frames are then run parallel with either fence, as the fall of the ground will best suit, and three feet from it, each frame being also three feet apart ; that is, the path between is three feet in width. The frames are made of a 12-inch spruce plank for the back, and a 9 or 10-inch one for the front, giving a fall only of 2 or 3 inches in the 6 feet—the length of the sash.

The most convenient length found for each section of frame is 60 feet or 20 sashes. No dividing bars are used between the sashes, but instead, stays are placed about every ten feet inside the boards, to keep them from falling inward, which they have a great tendency to do, as the soil inside the frame is kept soft by digging, while the pathway, of course, is hard.

The seed is sown for the crop from 20th to 30th September, either in the frames, there to remain, or else outside, and "pricked out" into the frames, at the rate of 500 plants to each sash. We usually adopt both methods, the pricked out plants being the best if they winter well ; but the sown plants are usually the safest.

They rarely require to be covered with the sashes at night in this district until the middle of November, and care is taken to expose them as much as possible in all mild weather during winter. No covering is used but the sashes. The costly and troublesome covering by straw mats we have never used, though they are still thought by many to be indispensable.

The varieties of Lettuce used are the Brown Dutch or Winter, Butter, and Curled Silesia ; this last being for the main crop, fifty of it being sold to one of the others. The planting out in the frames for heading up is usually deferred until the first week in March, experience having shown us that no matter how fine the weather may be, much earlier than that, nothing is gained by planting.

Three or four inches of rotted manure being dug into the frames, and the surface finely levelled with a rake, fifty plants are planted in a 3-ft. by 6 sash. It is ready for market from the 20th of April to the 20th of May, and averages about $4 per 100, or $2 per sash. But to make the sashes do a little more duty, in about two weeks after the Lettuce is planted, parsley seed is sown between the rows, which being rather slow to germinate, is just coming up at the time the Lettuce is cut off, but is still two weeks ahead of that from

the open ground; being thus much earlier, it sells well, giving about $1 more per sash. After the first cutting off of the Parsley, it is allowed to grow on undisturbed until the middle of September, when it is cut off close to the ground, to produce a crop of *new* leaves for winter. It is covered by sashes at the same time, and used in every respect during winter like the Lettuce *plants*, and marketed during the winter months, bringing again about $1 per sash, all being sold off to admit of the planting of the Lettuce again in March. Thus the double crop of Lettuce and Parsley gives about $4 per sash, the sashes being in use only from the middle of November to the middle of May.

It is still the practice of many private gardeners, and market gardeners in country towns, to plant in the fall the Lettuce wanted for spring use, in frames as they are to head up. This is a tedious and troublesome practice, resulting in giving a tougher salad, very little earlier than that planted in spring; and if earlier, of no advantage to the grower for market. Lettuce, like most vegetables, has a season, and only a limited quantity is wanted out of that season; hence, if the large quantities sold in the New York markets in May were offered in April, they could not be disposed of hardly at any price.

The increase in consumption of Lettuce forwarded in this manner has been enormous; far more so than with any other vegetable I have had to do with. Yet it may be gratifying to beginners to know that, though hundreds are now engaged in it, prices are quite as good now as they have been at any time during my time in the business, which has now been upwards of a dozen years.

[The above is by one of the most accomplished and intelligent market gardeners about New York. It contains the matured results of many years' experience, abounds in good sense, and possesses a practical value which our readers will not fail to appreciate. We have a promise of more from the same source.—Ed.]

THE CALIFORNIA GRAPE.

BY M. KELLAR, LOS ANGELES, CAL.

It is conceded by all agricultural societies, as well as by all others interested in the cultivation of the grape for the manufacture of wine, that there is really no suitable and productive wine grape, either foreign or native, to be found in the Atlantic States. Here in California, where the climate and soil are so unexceptionably adapted to the culture of the grape, native and foreign grapes have been tried, without finding one that can merit extensive cultivation. I myself have imported various sorts from the climate of Paris, in the hope that coming from a colder district, they might succeed better than others that have been imported from the southern parts of France, but with no better success.

There is a wild grape in California that is not, perhaps, worth cultivation. The grape in general cultivation is a Spanish grape, resembling very much the Madeira, first introduced into Mexico by the early Mission Fathers, and from thence to the Californias, (after a thousand trials, perhaps.) It is probably the most productive bearer in the world, the most delicious desert

grape, and at the same time has all the fine qualities necessary for making a first class wine. There is no doubt that, in honest and skilful hands, it will make excellent Champagne: it has abundance of saccharine matter which gives body, a primary requisite for making sparkling wines: it is what the Catawba lacks.

An abortive attempt at making Champagne out of California wine has been made in San Francisco, which utterly failed as soon as they commenced making it out of new wine in the first year not sufficiently fermented. It takes three years to make *good* Champagne; any thing short of this induces the factitious necessity of impregnating it with carbonic acid gas, &c.; such lame attempts are well calculated to bring discredit upon a wine not fairly started. It is a business that requires a heavy capital to keep several crops on hand until the wine is truly *ripe*.

Now what I want to come at is this: I am advised from different parts of the Southern States that the California grape has been tried there, and found to succeed far better than any other in cultivation; and I can not see any good reason to the contrary, judging by analogy, since none of the sorts in use in the Atlantic States, or the continent of Europe, succeed in California, except the Spanish grape already alluded to; therefore it is quite probable that the California grape may succeed in all the Atlantic slope immeasurably better than any that has been tried; or, in other words, succeed as it does in California. If this is so, and I am assured that it is, it will be a great boon to wine-growers, and a source of great wealth to the country. No branch of agriculture is half so productive as grape-growing, when well started, and none that requires less labor.

For surely the difference is very great between making an average of 200 gallons to the acre, the vines being planted three feet by five, &c., as in Ohio, Missouri, and other places, and 1200 gallons to the acre, as in California, the vines being planted six feet each way, pruned low, without stakes or scaffolding, and cultivated with ease by the plow.

As I said before, if it be true that the California grape will succeed immensely better than any other in cultivation, it is a matter of the highest national importance. I believe that it is so, and in proof, I have now on hands orders for 80 or 90,000 grape plants and cuttings from various points of Southern States and the Patent Office.

[We are by no means willing to concede that there is no "suitable and productive wine grape to be found in the Atlantic States." On the contrary, we are quite prepared to take the affirmative on this question, and to prove that we have several good wine grapes, such as Delaware, Lincoln, Herbemont, and Diana. We have letters from Messrs. Schnicke, Mottier, and others on this subject, which we shall soon publish. The Delaware makes a wine which will compare very favorably with the Hermitage. We think you made somewhat of a mistake in importing vines from the climate of Paris to make wine from in California; we should hardly have gone there; but we think you will yet find a native quite suited to your purpose. In regard to the Los Angeles grape, to which we suppose you refer under the name of the California grape, we tried it here in the vicinity of New York some five years since, but succeeded very ill with it, since it was almost sure to be winter killed to the ground. In some portions of the South, however, it has been tried, and our friends there speak well of it. It is no doubt worthy of a further trial in that region of country, to which it would seem to be well adapted,

and we think little risk would be ran in planting it. We should be glad to have Mr. Kellar give us a minute description of the grape, as it grows in California.—Ed.]

FERNS AND LYCOPODIUMS.

BY DANIEL BARKER.

Throughout Europe no family of plants are more popular, and certainly none possess more claims to admiration. My love for this interesting and beautiful class of plants existed long before they became such general favorites, at a time when they were little known or noticed, save to the student, or in botanical gardens and collections. Some twenty-five years have come and gone since I, in company with a loved one, went in search, over mountain and through morass and secluded valley, to collect our special favorites, and no known or unknown variety within our reach escaped our notice. And how delightful, after hours of pleasant toil, to return to our cherished homes to examine their elegant and graceful fronds, their inimitable beauty, and lovely shades of color. To my loved companion it was a never-failing charm, to collect and cultivate her especial pets; and I can never forget what a great amount of pleasure we all experienced when returning from a botanical ramble of some dozen or more miles, and sitting around our "ain fireside," in company with many dear ones, now gone to return no more. But I am digressing.

The great value of the interesting Cryptogamia consists in their intrinsic beauty, and in their applicability to specific purposes: for growing in very shady places where very few other plants can grow. They are singularly useful for covering rocks, where but little soil can be placed; they are equally at home for covering unsightly walls, either in green or hothouses, or the open air; for suspending in wire or rustic baskets from the roofs of greenhouses, conservatories, &c.; for enriching and decorating any rustic work, or for cultivating in the popular and highly decorative portable plant cases. One of their greatest merits is, that they are never out of place, in the secluded part of the garden, or any glass structure, the sitting-room, hall, or drawing-room; in all of which they are always green, elegant, and charming, and as an adjunct to bouquets they are a positive necessity.

They are valuable, as I have said, for planting in shady situations, where but few other plants will grow; indeed, whether it be in the greenhouse or the open air, the majority of the species luxuriate in a shady place, where the direct rays of the sun never fall. In such situations they are enabled to exhibit all their gracefulness and delicacy of structure, and the ever fresh loveliness of their beautiful verdure.

Some, it is true, are often found in very exposed situations, clinging to the face of rocks where there is comparatively no soil, and where it would be thought no plant bearing such an abundance of foliage could exist. Such is often the case with our exquisite Adiantum pedatum, Woodsia ilvensis, Dicksonia pilosiuscula, &c.; but these are the exceptions: as a general rule throughout the globe, plants of this order live and luxuriate in the shade. Hence the Rockery should have a northern aspect; the entrance to a grotto, or in the neighborhood of irregular masses of rock, or sylvan retreats, the

shady part of any building, bare walls of green or hothouses, or in any location overcanopied by foliage, present the very best places for them. Rockeries in the open air or otherwise are likewise well adapted for Ferns. Here is the natural home of many of our most beautiful species, and in all our rocky and sylvan retreats they are quite abundant.

Enriched with their graceful and elegant habits, the brightest flowers seem brighter, and those of tamer colors become much more striking. Those who have used them for grouping with orchids when in bloom, as is the custom in many of the large establishments in Europe, are never afterwards satisfied to see them otherwise, or with well bloomed specimens of Gloxinias, Gesnerias, Achimenes, or any other kind of flowers.

Much more might be added upon their culture (which is very simple) in the green and hothouse, the open air, and in the elegant portable plant (*not Wardian*) case.

Animated with a desire to see them more cultivated than at present, I may at some future time (should it be thought desirable) offer some remarks upon their culture, and endeavor to show that *all classes*, from the millionaire to the most humble artisan, may possess and cultivate at least a few of them. To me no house devoted to flowers seems complete without them.

[You have taken up a most interesting class of plants. Follow up with directions for special treatment, including plant cases, &c. Ferns and Lycopodiums have heretofore been confined to the few, but they are preëminently the plants for the million, especially for winter culture. As intimately associated with these, take up Orchids next, Mr. Barker, and go into details. We want more knowledge on the treatment of Orchids, and your long familiarity with them ought to enable you to supply it.—Ed.]

DESIGNS IN RURAL ARCHITECTURE.—No. VIII.—A COTTAGE STABLE.

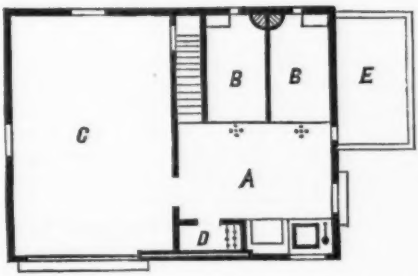
BY GEORGE E. HARNEY, LYNN, MASS.

The subject of proper stabling and grooming for horses is one that has been wofully neglected in this country until within a very few years.

In former times a stable, and more especially a country stable, was oftentimes merely a shanty, serving only to shelter the animal from the hot sun of summer, or from being completely buried in the snows of winter. As for comfort, that was out of the question, and warmth was only partially preserved by the thick, clumsy coat of fur with which, for want of proper artificial clothing, Nature had mercifully provided him.

But we are happy to say things have changed in this respect, and people are beginning to enlighten themselves on the subject. In these days a horse is looked upon as an intelligent creature, inferior only to man, his master, in tractability, and in requirements yielding to none but him ; consequently we see the need of building stables thoroughly, with a plenty of room, a plenty of light, and of having them well ventilated, on scientific principles, that they may be cool in summer, and warm in winter, and *airy* at all seasons ; of giving the exterior a pleasing architectural appearance, according

A COTTAGE STABLE.



in style with the dwelling-house of which it is an adjunct; of keeping its yard and the adjoining grounds always clean and in good order; in fact, making the stable a pleasing object in the landscape picture of the estate, and a cheerful, comfortable, inviting place for its occupants.

Every stable should consist of two distinct apartments; the one for carriages, and the other for horses. The horse apartment should contain the stalls, each five feet wide, and eight feet long, or eighteen feet to the back wall, with the floor, either of plank or brick set on edge, slanting backwards two and a half or three inches. At the rear of the stalls should be a depression in the floor, bored with half a dozen auger holes to convey away urine. A cast-iron feed box should be fitted to one corner, and a hay-rack of iron wire to the other corner of each. From a convenient position stairs should rise to the hay-loft above. Near the outer door should be a pump and trough to supply fresh water at all times; and close by, chests for oats, meal, and corn, and a trough for mixing feed, all lined with zinc, and furnished with a cover and lock. A closet should contain half a dozen pegs for harness, a couple of drawers for blankets, &c., a rack for whips, and a small cupboard for medicines, oils, blackings, &c. From the ceiling of the horse room an air shaft, supplied with a trap valve, should be carried through the hay-loft, terminating in the ventilator on the roof. This, with ventilators in the doors, will give a thorough current of pure air at all times.

All the outside doors should have an extra set of hinges to hang gates upon, which should be used in summer instead of close doors.

Thus we have endeavored to give a few simple directions for building and furnishing a country stable of moderate size. The accompanying design will explain more fully the details we have noticed, and may answer as a guide to those about building.

It contains accommodation for two horses and two carriages, and may be constructed for two hundred and fifty dollars.

CULTIVATION OF WILD FLOWERS.

BY C. N. BEMENT.

In the August number of this Magazine we gave a short catalogue of wild plants which we deemed worthy of cultivation, and promised to extend the list at some future time. We now redeem that promise by giving the following, which we consider meritorious and worth attention.

To those interested in floriculture, we would recommend, for the advancement of their gardens, one great storehouse of beauty, viz., the woods and fields, with their wealth of uncultivated blossoms. It is in the power of almost every one to draw from this source, and, such is the perversity of human nature, perhaps on this very account the opportunity is neglected. While various flowers, neither graceful nor fragrant, are admitted into the limited precincts of a garden, because, perhaps, they are rare, of difficult growth, or foreign extraction, many a wild, sweet native of our own hills and valleys would be altogether denied a place there. This is in bad taste, and the usual plea, "Oh! they are so common!" is by no means a reasonable or satisfactory objection. Whatever is perfectly beautiful might claim

a place, though this would include so immense a collection, that, of course, we would recommend a judicious selection from so vast a stock.

We find upon trial some of our native plants rather difficult to cultivate; and after a few years they entirely disappear, unless special care is bestowed upon them, and their habits studied. They appear to suffer more from the effects of freezing and thawing in the winter, thus injuring the crown of their roots; or, being thrown out of the ground by the action of the frost, they are destroyed. They receive some protection in a natural state by being in winter covered with water, grass, leaves, or snow; and should likewise be protected under cultivation, by throwing over them straw, hay, litter, or earth.

The names of the comparatively tender plants are: the *Asclepias tuberosa*, with its bright orange-colored flowers. It is a rare plant in this vicinity, and we know of none in a wild state. We found it on the sandy plains four miles north-west of Albany. The rich flowering *Liatris scariosa*, with its raceme of bright purple flowers. Its root is a solid tuber, and truncated; that is, it has the appearance of its end being bitten off. The popular name of this plant is the "Devil's Bit." We were informed, many years ago, by an old root doctor, that it received its appellation in this way: It having come to the knowledge of the great adversary that this plant was useful to mankind, and possessed great medicinal properties, he, in order to show his enmity to our race, bit off the end of the root, thereby depriving it of its most useful properties. Upon doubting the truth of the legend, and observing to him that the roots of some other plants presented the truncated form, "Why, bless me!" replied the old man, "don't you see the marks of his teeth?"

The Liatris is found growing in a clayey soil, on the borders of woods. To this family we are indebted for many of our autumn ornaments in our flower-garden borders. They are herbaceous plants, propagated by division, and flourishing in common garden soil. Fine specimens of this plant can be easily obtained by seedlings.

The Indian Turnip or *Arum*, with its singular flower, variegated inside with stripes of pale green or brown. In autumn, the plant presents its bunches of shining scarlet berries.

The splendid Cardinal Flower, *Lobelia cardinalis*, when once introduced into a garden, will propagate itself by its seeds, and produce some fine plants.

There is another tribe of native plants that require no particular attention, but when once introduced into the garden, continue to grow and thrive for many years. The names of some of these are the *Starworts*, some of which are very beautiful and showy, and can be made to grow to the height of ten feet, bearing upon their spreading tops quite a large number of flowers.

The Golden Rods, *Solidago*, many of them coarse but showy plants. Hardy herbaceous plants, all yellow flowered; found in all parts of the country. Propagated by division of the plant in spring in common soil. Showy at the back of herbaceous flowers.

By taking up, in the autumn, the Side-saddle Flower, *Sarracenia purpurea*, with the wet sphagnum attached to its roots, put into water, and cultivated like the Hyacinth, and placed on a parlor window, it will flourish, and show its curious flowers toward spring. Half hardy perennial. Division

in spring ; fibry peat and chopped sphagnum moss ; a pit or frame will be necessary for their cultivation to keep them from freezing in winter, and to afford them a clear humid atmosphere in summer.

Many persons who set about filling a border with choice flowering plants, and who wish to make a selection of those both easy of culture and beautiful, are at a loss which to select among the thousands offered by seedsmen and florists. It is not our purpose, in this article, to offer a select list, but to make some remarks on a few of our *wild* plants worthy of cultivation. We omitted to mention in our former article :

The Scarlet Columbine, *Aquilegia Canadensis.* This well-known plant grows on dry rocky hills and in gravelly soil ; of elegant habit, and bearing delicate, pendulous, scarlet and yellow mixed flowers ; very showy. When removed from its wild locality to the richer soil of the garden, it grows with great luxuriance, and produces tenfold more flowers than in its wild state ; but it should be transplanted into fresh soil every second or third year.

The White English Columbine should be planted together for the contrast of color. When thus situated, beautiful hybrids can easily be obtained from the seeds of the English Columbine, partaking of the character of both species, and distinct from either. Seeds in March ; common soil. Seedlings flower sometimes the first, but generally the second season. All hardy herbaceous perennials. May be found growing from Canada to South Carolina.

Lily of the Valley, *Convallaria majalis,* deserves a place in every garden. It thrives best in a shady situation ; a low growing plant, with racemes of white, sweet-scented flowers, and is very hardy.

Trillium ovatum. There are eleven varieties or species of these plants in this country, from Canada to South Carolina. Some one or other may be found in most of our low, woody swamps, or on the borders of them. They are a curious tribe of plants, and very ornamental, flowering in May. The flowers are universally of three petals, and the leaves grow also in threes, called by botanists *trifoliate ;* probably from this circumstance the name "Trillium" is derived: they are all natives of shady woods and swamps. They can be transplanted and cultivated in the common garden soil, and ought, therefore, to be planted in the border.

Pond Lily, *Nymphæa odorata flore pleno.* There are four species of these plants in this country, of which the *odorata* is the most common and most beautiful. The flowers are white, tinged with yellow, and highly fragrant. Common in shallow ponds. We have noticed them in a mill-pond at the Shaker Village, near Albany ; in Irondequoit Bay, Lake Ontario. They are also found in mill-ponds in the vicinity of Poughkeepsie. Propagated by seeds, division of the roots of some, and separating the tube-like bottoms of others. They like a rich or loamy soil, and plenty of water about them.

Water Lily, *Nuphar Kalmiana,* small yellow, native of Canada, and the *lutea,* also yellow ; not plenty in this section.

The Hare-bell, *Campanula rotundifolia,* is worth cultivating for its poetic associations. The annuals are chiefly pretty low-growing plants, the seeds of which may be sown in the common border in the beginning of April. The biennials may be sown in April or beginning of May; many of them will bloom the same year ; by cuttings, a perennial habit will be given to them. Perennials, chiefly by divisions of the roots and plants. Common

soil for most of them; a little peat and dung for them in pots. Flowers blue.

We propose, if agreeable to the Editor, to furnish an article on the cultivation of such trees and shrubs as are distinguished for their beauty or singularity, together with the soil and locality in which they flourish.

[Certainly, we shall be glad to have it.—Ed.]

CALADIUM ARGYRITES.

(*See Frontispiece.*)

BY THE EDITOR.

We present for a Frontispiece this month a drawing of the *Caladium argyrites*. The drawing was taken from a very fine plant in the collection of C. Van Voorst, Esq., who, we believe, was the first to import it. It is, in our estimation, much the prettiest of the Caladiums. The whole plant is one of great delicacy; the green is very soft, and the white pure, and the contrast is striking and beautiful. It is a hothouse plant, and delights in a warm moist atmosphere. The plant in the frontispiece is of the natural size. It deserves a place in the smallest collection of ornamental leaved plants. We have in preparation a plate of the Caladium Chantinii, with which we shall give directions for the cultivation of the Caladiums.

THE OPORTO GRAPE.

BY E. WARE SYLVESTER, LYONS, N. Y.

A few years since my attention was directed to a grape cultivated by farmers and amateurs in this vicinity, for the manufacture of wine for medical, sacramental, and social purposes. The cut is a good representation, drawn by actual measurement from a cluster this season. The skin is black, covered with bloom; the juice is thick, and when fully ripe, dark red, staining the hands a purple color, and imparting to wine made from it, without water, the dark color usual to Port wine.

There is an opinion that the original vine was given to Miss or Mrs. Dunlap, by a ship captain, and that he brought it direct from the city of Oporto, which would make it a foreign grape; but the growth of the wood, the shape and texture of the leaves, its perfect hardiness, with the vines never laid down, in latitude 43° north, lead me to the conclusion that it is an American seedling, though it may be the child of foreign parents. Having asked the opinion of N. Longworth, Esq., on the subject, he writes, "If the Oporto is perfectly hardy, I can not think it a foreign grape."

The wine made from it has the flavor and peculiar bouquet of old Port, and is pronounced by good judges nearly or quite equal to the best imported Port; and there is no doubt in my own mind that from this vine may be manufactured a wine which would supersede the foreign article.

[We received a box of the Oporto grape with the above, and also a couple of samples of the wine, evidently not made by skilful hands, but still pre-

THE OPORTO GRAPE.

senting evidence that a good wine can be made from this grape. Mr. Sylvester's seems to be a fair description of the grape. The bunch is small, slightly shouldered; berries small, round, black, with a bloom, and a dark purple coloring matter under the skin; pulp firm and mucilaginous. It is not a table grape, but may prove of value for wine. We think it closely resembles the Marion. It is undoubtedly a native. We would suggest to Mr. Sylvester's friends, who made the wine sent us, that they omit both sugar and water in its manufacture. The sooner it is understood that additions of these kinds are a positive injury, the sooner we shall have first-class wines. Let us by all means have "the pure juice of the grape."—ED.]

A VISIT TO THE SHAKERS—GRAPE-GROWING AT NEW LEBANON.

BY WILLIAM BACON, RICHMOND, MASS.

A YEAR ago last spring we made an engagement to visit this settlement in early autumn, and test the qualities of the produce of such of the fifteen hundred seedling vines raised by Philemon Stewart, as the season should bring into bearing; but, unfortunately, the frost of June gave a finale to all the grapes set at that time, and this was a finishing stroke to the prospects of fair specimens for that year, though we were pleased to notice that a new crop followed that frost, many of which attained a fair maturity.

The opening of the present spring brought to our mind the beautiful young vines of New Lebanon, and we renewed the promise that, if circumstances favored, we would this year enjoy the luxury from which the last cut us off, and witness the triumphs of Mr. Stewart's labors.

Accordingly, on the 3d of October, one of the few clear and sunny mornings that have smiled on our northern region this fall, we set forth on what is always a pleasure to us, a jaunt across the Taconic hills, and a visit to this hospitable community. The road, be it regretted, is not altogether of such a character as to make one's way smooth and easy over the ups and downs of nature's clivities. Here the water had taken advantage of the earth, loosened by travel, and worn its course lengthwise of the road, until an obtrusive rock barred its further progress, and turned it into the weed-grown side ditch. Anon, a water-course had caved in, and left no memorial of its former being but a deep slough half filled with stones. This we found on the Massachusetts side of the hill, in a section without inhabitants for some distance, rendering it still worse if accident should happen to life or limb of the traveller.

Good roads we have ever considered among the prominent features of refined rural life, and we deeply regret that in so many places these thoroughfares, so essential to human progress and human comfort, are becoming so sadly neglected.

The neatness and order with which the Shakers manage their affairs, are too well known to need any comments. It is only necessary to visit them to find very much in their habits worthy of imitation. There are no communities more hospitable to their friends than they, and none more cheerful in their habits. Travellers may speak of them as stiff and formal; but if

they knew them better, and won their confidence with greater courtesy, they would see the error of such uncalled-for opinions.

Something over a year ago we were shown, by Philemon Stewart, a large lot of grape-vines, originated by him from seed. Few of them at that time were coming into bearing, and the late frosts of June, of that year, prevented those that would otherwise have done so, from giving even tolerable specimens.

The last season has, however, been more fortunate. Of the hundreds of vines, many have now shown their first fruit. As any one would expect, it was a strange and mixed variety. Some worthless, some ordinary, and a few promising well. Of those that bid fair, we tasted some twelve or fifteen varieties. These are to be made subjects of further culture, and when their character is fully established, Mr. Stewart proposes to submit them to the action of some reliable pomological society for character and name.

It has required much labor and anxious care to bring these vines forward to their present condition, as, so far as present appearances can show, there is a reasonable prospect of remunerative success. Indeed, should one new variety of desirable qualities of flavor and hardiness be the result, the work will be a triumph. If more than one, all the better. What we most need is *good* hardy grapes, such as will meet the culture of all circumstances, and bless the million with their healthful clusters. The man who will originate such a variety will surely be a public benefactor.

During the past year Mr. Stewart has been removed, to take charge of a society in Maine, near Portland. He informed me, in his recent visit to Lebanon, that he proposed in the spring to start vines of his better varieties in that locality, to test their qualities in a more northern home.

We inquired what manure was best adapted to the vine? These seedlings have thus far been left to nature, and grown without manure or pruning thus far. But for grapes under culture, bones are considered first. We saw a large pile of these in preparation, with muck taken from a pond, soap suds, and like material.

In this Society we saw a beautiful plantation of Pears on the Quince. Their method of cultivating them was novel to us. Instead of setting them with the junction of the Pear at or below the surface, they had been put at about the same depth they stood in the nursery, and hillocks of compost rising twelve or fourteen inches above them. We demurred at this system of culture, but was told that it had been designed to raise the general surface as high as the hillocks, by bringing on a prepared soil: a laborious operation, truly, but no doubt a salutary one when adopted.

They have been very successful with these dwarfs so far, and we would recommend unbelievers in this system of culture to visit a few such plantations. They would see the thing is possible, and in some instances practicable.

In the natural world nothing runs to waste, nothing is lost even in decay. The leaves of the forest that fall annually—the old giant trees which, after centuries of existence, make the earth groan as they come down to lay their monster trunks asleep upon its bosom, decay and become parts of new vegetations, to smile again in youthful beauty, feeding the flowers and swelling the fruits.

In their usual economy, this Society allow nothing to waste. The slightest refuse, instead of being allowed to lie and moulder away, and poison the

air, is carried off and deposited for some special uses. At one of the families of sixty persons we saw a specimen of this saving operation, well worthy of general imitation. We were shown a new building, neatly finished and painted, in the rear, and under which, entirely inclosed, is a vault some fifteen feet by twenty, and ten feet deep, stoned and laid in water lime. Over the eastern portion of this was a privy, neatly arranged. Entering through the east wall was an iron pipe of sufficient capacity, the outlet of a subterranean drain leading from the dwelling, and designed to convey all the wash of the house to this reservoir. On two sides of the reservoir were spacious platforms for the storage of such materials as they choose, to be thrown into the vault as absorbents and neutralizers. In this way they will manufacture great quantities of valuable manure from materials which are too often wasted, and do it in a way conducive to health by taking what is too often allowed to poison the air by evaporation. If arrangements of a similar character could be furnished in the public places of cities and large towns, would they not be a great accommodation to the people as hygienic auxiliaries, and to cultivators in the country from the increase of fertilizing material they would afford?

It appears to us, from a view of this arrangement, that similar ones might be provided on public squares of cities and large villages, and made profitable investments to any one who would erect and take charge of them. There would certainly be nothing repulsive in the appearance of such a building as the one we saw in New Lebanon. But if it should appear so to others, let it be screened by a clump of trees or arbor of vines. We are sure if they were once adopted, the public would not readily have them removed.

[A valuable suggestion, not only for towns and cities, but for every homestead in the land. We might often learn useful lessons from those we affect to despise.—Ed.]

THE GOLDEN DATE (PHŒNIX DACTYLIFERA.)

BY WM. N. WHITE, ATHENS, GA.

We see by the newspapers that the Date, the current year, has been successfully grown in the south of France. It may not be known that for some years past it has been grown in the open air in the United States. A magnificent cluster of the variety named at the head of this article, was one of the attractions at the late Fair of the Southern Central Agricultural Society of Georgia, at Atlanta, and seemed to be looked upon with more interest than almost any other thing exhibited. Hanging on the wall, near two large olive branches, also loaded with ripening fruit, and in company with Oranges and Pomegranates, all grown in the open air, to say nothing of Figs and Grapes, one was forcibly reminded of the East; but in the same structure the Apples in profusion, the Pears and Peaches, excellent and beautiful, told of the resources of a State at one extreme productive in tropical fruits, while its central portion and northern extreme were profuse in the products of the milder temperate climes.

The Dates mentioned, and the Olives also, were grown upon the plantation of Col. P. M. Nightengale, at Dungeness, Cumberland Island, Georgia. The cluster sent was gathered from a tree about twenty-five feet high, on which were four or five other similar but larger clusters. The common fruit-stem or peduncle thereof was about three feet long, flattened and curved like a scythe. Its width was about two and a half to three inches, but not over half an inch in thickness. At its fruit-bearing extremity sprung some one hundred or more minor fruit stems or pedicels, all starting nearly but not quite together, the upper ones being three or four inches in their point of departure from the common stem above the lower, and covered by them. These stems bear many blossoms, most of which are abortive; but from one to six or seven ripen upon each stem, but so many more at the top that the mass of the fruit is like a corymb. These minor fruit-stems are about a foot in length, four-sided, flattened, and very tough. The fruit is oval, as in the figure, which is less oblong than in many specimens, from an inch to an inch and a half long, by one-half to seven-eighths of an inch in its lesser diameter, growing sessile upon the pedicel, and with a small point at the apex. The fruits all seem to be stoneless. Although not fully

ripe, the fruit, the pedicels, and most of the large common peduncle, were of a rich golden yellow, (corn color.) There is a variety much more common in cultivation, which resembles this in every particular, except that the fruit and fruit-stems are all of a reddish brown. The unripe fruit is nearly as rough and astringent as the unripe Persimmon or American Date, but at maturity it softens and sweetens, and becomes a very agreeable fruit. Col. N. states, if I rightly understand, that the leaf-stalks of his trees are some ten feet long, and the leaf itself (lamina made up of many pinnæ) about ten or twelve feet in addition. There is a figure of a tree in Loudon's Encyclopedia of Plants, p. 829, No. 13,831, which we copy, as it gives an idea of the tree as grown at the East. The stones of the dried Dates of commerce, it is said, when planted grow freely. Loudon describes the Date as "a lofty palm with a rugged trunk, on account of the persisting vestiges of the decayed leaves. These leaves, when the tree is grown to a size for bearing fruit, are six or eight feet long, with pinnæ three feet long, and a little more than an inch broad. The flowers of both sexes come out in very long bunches from the trunk between the leaves, and are covered with a spatha,

which opens and withers ; those of the male have six short stamina, with narrow four-cornered anthers filled with farina. The female flowers have no stamina, but a roundish germ, which becomes an oval berry with a thick pulp, inclosing a hard oblong stone, with a deep furrow running longitudinally."—(*Encyclopedia of Plants.*) The Date tree is more hardy than the Orange, Col. Nightengale informs me.

[We thank Mr. White for bringing to the notice of our readers the interesting fact, that one variety at least of the Date Palm is hardy at the South. Accustomed as we have been to see an occasional specimen of diminutive growth in a collection of rare plants, his description, with its luxuriant leaves twelve feet in length, carries us back, in imagination, to the "sunny clime of the Olive and Palm," and we revel again amid the scenes of our youthful reading. If steam, in one sense, has annihilated distance, and brought remote countries close together, so, in another sense, has Horticulture; for we find the tropics almost at our doors. The fact stated by Mr. White is not alone interesting; it will have a special importance to those of our readers living at the South, the Date being a peculiarly wholesome fruit.—Ed.]

LANDSCAPE ADORNMENT.—No. VI.

BY GEO. E. WOODWARD,

Civil and Landscape Engineer, 29 Broadway, N. Y.

In all the various departments of Art, there exists much diversity of opinion in regard to true excellence; scarcely any two acknowledged authorities agree in what is truly artistic and beautiful, and the further we recede from the true artist, the greater the disposition is to condemn.

The range of excellence in high Art is a very extensive one, and to take any particular school of Art for a standard, and judge all else by it, is a folly often committed by those of limited information. There is in no Art a law that overrules any peculiarity of style, manner of expression, or of execution; peculiarities exist in every individual, and the higher we ascend the scale of merit, the more original and less imitative both design and execution will become.

We have before stated the possibility of adorning a landscape in very many different manners, neither of which shall have any thing in common with each other, and yet all shall fulfil every condition of high Art, and strictly accord with the principles of refined taste. A diversity of talent in a collection of works of Art is much to be desired; a gallery of pictures by one artist, or of one school of art—a city built by one architect, or in one style of architecture, will not, and can not, satisfy the general taste for variety. No matter how superior may be the taste and ability of the artist who designs and executes; by comparison, and not by repetition, the mind judges and appreciates, and forgets any sense of weariness. The employment of varied talent in any work of landscape embellishment, would be a somewhat novel feature, but would certainly yield far more satisfaction than the disposition to accept the whims of every would-be critic.

In Landscape treatment on an extended scale, such as public parks, rural cemeteries, etc., and more particularly in our own Central Park, which is designed to be a model of landscape adornment, we should like to see a system of execution carried out, that shall furnish an example of the different styles of all the acknowledged talent and ability that seek a name and fame in the pursuit of an Art so beautiful and attractive. We should prefer to see the execution of certain portions delegated to educated and skilful professors of the Art, and let them be alone responsible for its manner of planting, creation of effects, and arrangement of details, and which shall join harmoniously with all around it. The intention is, as we understand it, to introduce the excellences that exist in all the various schools of landscape adornment; but as the tendency of any one controlling mind is to run in a particular or peculiar direction, we shall see its impress in the execution of any and every mode that is adopted. To us the Central Park, like the Dusseldorf Gallery, is a school of study, and our wish would be to see displayed there all the talent in rural art and embellishment that money can command. The duration of human life is not sufficient for any one artist to finish the Central Park, and each successive one, in order to show how much smarter and more efficient he is than his predecessor, will condemn and remodel all that he dare to of what has gone before him, and we may therefore hope to see carried out, simultaneously, individual styles of landscape art, as to look for their certain development at intervals of years.

> "Insult not Nature with absurd expense,
> Nor spoil her simple charms by vain pretence;
> Weigh well the subject, be with caution bold,
> Profuse of genius, not profuse of gold."—*The Gardens.*

As exponents of two schools of landscape treatment, and as examples showing the manner in which pure taste may differ, compare the primeval beauties of "Idlewild," nature left alone, with the princely park at "Wodenethe," its exquisite finish and elegance, a lawn that knows no equal, and an arboretum unsurpassed in every thing that is rare and choice, and say which indicates the absence of truly artistic management.

A certain intuitive knowledge of construction, or the instinct of self-preservation and protection, is a gift implanted in many grades of the animal kingdom; each species has one form of construction, they build after one plan, and the progress of time makes no change nor adds any improvement whatever; they adhere to the original designs, have no different orders of architecture, no modern forms, no Gothic, no Italian, no Elizabethan, and no new American style; and while instinct alone directs one course, and one only, reason leads every man to adopt a different form from his neighbor, and to wage a war of criticism against all that does not fulfil the conditions that his experience, his imagination, or his supreme ignorance, has led him to believe to be correct.

We do not all see the same things through the same medium; impressions are not received alike; an acknowledged standard of taste is not a standard of taste to all men, and it is hardly reasonable to suppose there is a standard of education which will enable all men to think alike in matters of taste. The natural instinct of construction, and ignorance of all the progressive rules, established tastes, and collected excellences in that Art, and in the art of design, tempt men to become critics, and often to attempt the execu-

tion of works of art. The education, experience, and skill of the artist, the architect, the civil engineer, the landscape gardener, the draughtsman, etc., are thoroughly ignored, the short cuts of professional ability are cast aside, and the preference acknowledged, to sink money in spoiling the beautiful hints that nature has generously given, rather than for that assistance or advice which would enable him to complete her admirable designs.

The sad disappointments often resulting from first attempts in landscape gardening, so little satisfaction for a liberal expenditure, and so much said about the cost of rural improvements, instead of experiments, are but few of the arguments we might use to him who expects to unite economy with taste in the embellishment of a country home, without first making himself master of the art he proposes to practice.

[Mr. Woodward's suggestion in regard to the Central Park is a novel one. We undoubtedly have talent here of a high order in landscape adornment, and an experiment of this kind would naturally tend to develop its highest phases. We think it might be done in such a way as to harmonize all the parts into a beautiful and effective whole; but it would require a combination of the nicest judgment, taste, and skill. We must not, however, overlook the acknowledged advantages of having a master mind to preside over all great works. Mr. Woodward's suggestion evidently refers to that portion of the Park not yet laid out; but we fear that it comes too late to receive the serious attention of those having charge of the work.—Ed.]

VIRGIN LOAM—THE FORMATION OF SOIL.

BY WILLIAM BRIGHT, PHILADELPHIA.

The choicest production of nature for gardening purposes, is the simple natural loam of a fertile pasture, which has not been cultivated for many years. A thick old sod, with a bit of turfy loam, which has not been disturbed by the plow for a long time, contains the elements of a good soil, in a condition which can scarcely be imitated by the art of man. A grape border formed of such materials alone, finely broken up, is perhaps equal, at first, to any composition that can be made. Why is this? In what manner and by what agencies has nature elaborated in this natural soil the elements of plant-growth, the sources of such certain and perfect fertility? We have often heard these questions asked, but until recently have never heard or seen a philosophical solution of the problem. Gardeners generally look upon the thing as a great mystery, a secret past finding out. Geology, we think, penetrates the heart of this mystery, and reveals the secret in a most satisfactory manner.

Geology, investigating the nature of the various strata, rocks, and other component parts of the earth, has been compelled to examine carefully the processes by which soil is formed, and presents to us the astonishing but undeniable fact, that the most important agents in the formation of both rocks and soil have been *insects*, or *animalculæ*, a vast proportion of them too small to be distinguished by the naked eye. Some of the limestone rocks are almost entirely composed of the remains of cretaceous or shell-

covered animalculæ, of a size so minute that millions are condensed within the limits of a cubic inch. The creation of immense rocky reefs, hundreds of miles in extent, by the coral insect, is another instance of the part performed by minute creatures in the formation of the earth. The true *soil-makers* are also insects, and the chief of these is our old acquaintance, the *common earth-worm*, (*Lumbricus terrestris*,) or angle-worm, universally found in all good carbonaceous soils. This humble and seemingly useless creature is shown, by scientific research, to be the great natural *mould-maker*, or *loam-former*, of the entire earth. It is this poor, senseless worm which composts the elements of virgin loam and rich turfy sod, so much prized by all gardeners, which prepares, by mastication and digestion, as it were, the mineral and vegetable parts of the soil, the rocks and leaf-mould which form the basis of all soils, but which, without the agency of this worm, would lie separate, unmixed, and unfertile. How this is done, let us consider.

The ant and the earth-worm are called by geologists the pioneers of cultivation. As the honey-bee precedes the march of civilization towards the great forests, so the ant and the earth-worm precede the gardener in the cultivation of the soil. On a newly-made gravel walk, which is a good representation of a barren, rocky soil, the first insect which makes its appearance is the industrious little ant. These insects burrow into the sand, work it over and over, drop their excrement, die, and mingle their bodies with the ant-heaps, attract other insects, collect vegetable and animal matter, and thus organize the first elements of soil. Now coarse, rank grass starts around and among these ant-hills, and these primitive forms of vegetable life dying, create the food of new and higher classes of plants, which, again dying, year after year, soon deposit a layer of vegetable matter or leaf-mould upon the surface of the sand and gravel. After this comes in the earth-worm, and the richer the layer of vegetable matter, the sooner does the great soil-maker appear upon the scene. The earth-worm, it would seem, feeds not only upon vegetable matter, but upon sand and rotten rock, or at least in its travels up and down through the surface material of the earth it passes through its intestines not only vegetable fibre, but coarse particles of sand, and a great variety of rocky substances rich in mineral elements, which it mixes, ferments, and composts, and finally ejects, in the shape of excrementitious worm-casts, upon the surface of the earth, thus furnishing the materials of pure loam, in the most perfectly combined and most finely divided form; just that rich, but simple, pure, natural, mysterious "bit of virgin loam," which the experienced gardener, the world over, so ardently covets. Neither vegetable matter, nor mineral matter, unmixed, will create a fertile soil. Nor will merely mixing these substances together form a perfect loam. The rocks must be weather-worn, and decomposed by the action of air and water, by oxygen and carbonic acid. The vegetable fibre must decay and become converted into humus or pure mould. The earth-worm must feed upon these changing substances, and thus hasten the chemical changes, by its simple digestion, mixing and combining all in its poor maw, and finally ejecting its manurial treasures upon the surface of the earth, rich, carefully prepared, perfect plant-food, containing all the elements of fertility, united with a degree of skill beyond the art of the chemist or the gardener.

Here, then, is the great vegetable mould-maker, the great natural com-

post-former, a common earth-worm. It is said by scientific observers, that the earth-worm will create, by its excrement ejected in the shape of worm-casts, an inch in depth of mixed or perfect soil over the entire surface of a rich field within the short period of three years. But the labors of the worm do not end with the first formation of the soil; it is constantly at work, opening the subsoil, and admitting air and water through its burrows, and bringing up the rich mineral elements from below, well digested and divided, to restore the waste of cultivation. And it is this poor worm which when we rest our exhausted soil, in a measure renews the fertility of our fields, by its never-ceasing chemical and mechanical labors in sand and leaf-mould. The presence of the earth-worm, and its little heaps of masticated soil, in large numbers, may thus be taken as the evidences of a fertile loam; for the little mounds which the worm throws up from its burrows is the great natural fertilizer of the earth, before which the special fertilizers of man sink into comparative insignificance, as crude and ignorant compounds.

In view of these facts, the gardener will no longer look upon the earth-worm (as he has sometimes done) as a worthless and destructive creature, which eats up his good loam, but as his co-laborer in the cultivation of the earth, his superior as a compost-maker and sod-former, and the manufacturer of his much-prized virgin loam. Thus happily does science penetrate and explain the seeming mysteries of nature.

[A happy defence of one of the gardener's best friends. There is really nothing useless in the vast world of nature; nothing made in vain. In connection with this subject, we may mention that we have only to cover a piece of ground for a while with some boards to greatly increase its fertility: the reason of this is, that the boards afford a convenient shelter for the worms to work under, and the earth will be found full of their exuviæ. For the same reason, the soil under surface rocks is always more fertile than that surrounding them; and many similar cases will be suggested by Mr. Bright's article. We hope he will continue a subject he has so well begun.—Ed.]

THE DELAWARE GRAPE—REPLY TO MR. THOMSON.

BY WILLIAM R. PRINCE, FLUSHING, L. I.

I regret that my worthy friend, A. Thomson, Esq., of Delaware, Ohio, should feel aggrieved, as is indicated by his article in the Horticulturist of the present month, for assuredly it is without cause so far as himself is concerned. I am not aware of ever having made a remark *personally* disrespectful toward him; for, indeed, I do not consider him as sustaining as a fact the point I have assailed. It is true that the naming a *foreign vine*, or even a *native vine*, that had been brought there from New Jersey, the "*Delaware*" grape, was at least inappropriate, and calculated to impress the public with the belief that it originated there. But it seems quite probable that Mr. Thomson supposed it at first to be a native of that vicinity. I certainly derived such an impression from the early correspondence with him on the subject. He, however, afterwards stated that it had been traced to

New Jersey; and when I visited him, in September, 1859, on my stating to him that it was absolutely foreign, as I had done in repeated letters, (which he has not thought proper to quote,) he no longer claimed it to be a native, and I felt satisfied that he had become convinced to the contrary.

When visiting Delaware, I called first on Mr. T., and although he had a number of the vines of bearing size, and his small city garden seemed well sheltered, there was not one berry. He named but one person who had the Delaware in fruit, and we went to Mr. Campbell's, where I saw *but one vine*, although it may have had three shoots, (now called vines.) I visited Mr. Charles Sweetzer's garden, and found other grapes, but no Delawares, nor could I, on inquiry, hear of any other vine bearing fruit in the town. I was told that it was notorious that Joseph Heath, living just out of town, brought the first vine there from Bordentown.

In regard to my having expressed an opinion in 1855 that the "Delaware" was a native variety, the cause of the opinion then expressed has been so often explained, (and, as I had supposed, to Mr. T. himself,) that I do not consider an error arising from the acts of others, and long since corrected, can be fairly quoted against me. Mr. Thomson's correspondence, and the statements made at a fair I attended in Ohio, where "Delaware" grapes were exhibited, all led me to suppose it was *a native variety*. I received a package of layers from Mr. T., and on the same day a package of layers of the Ramsdell grape from another person. Neither parcel had any label by which they could be distinguished; and, in deciding their identity, the Ramsdell vines were marked Delaware, and planted with great care in my garden, with the name of "Thomson" attached to them, and the Delaware vines were marked Ramsdell, and sent to the nursery half a mile off. Watching the development of the supposed Delaware, (but in reality the Ramsdell,) and finding the large foliage of the *Labrusca*, I boldly stated to Mr. T. and some others that the Delaware was positively a native, and it was not until I made another purchase of Delaware vines that I discovered the error. Like others, I may be misled by a false issue, but I never change an opinion once formed, as I seek, when advancing it, to place it on an incontrovertible basis.

It will be recollected, when the "Rebecca" grape was announced with furor as a *genuine native, with foxy odor, &c.*, that I instantly pronounced it a Chasselas seedling; and now, all those who then so determinedly opposed me have acquiesced. I only ask five minutes' inspection by any person who will call upon me, to prove the "Delaware" to be a *Vitis vinifera*. In a future communication I will present the peculiar characteristics which distinguish the Vitis vinifera, and will point out those which prevent the successful vineyard culture of any of its varieties. I will also extract the opinions from numerous letters, proving *the utter failure of the "Delaware" in open field culture.* As to any special "self-interest" in the matter, I set such allegations at nought, as more profit can be made by conforming to a popular delusion, than by opposing it, even in the culture of grapes.

Having always viewed our country as preëminently stamped by God as "The Land of the Vine," I labored, in connection with my revered father, for fifteen years antecedent to 1835, to establish American vineyards with foreign vines. Nicholas Longworth, Dr. J. B. Garber, and a host of others, were engaged at that time most ardently in the same pursuit. And what was the result? All our hopes were blighted, and there is not even one who made those great and expensive experiments, but will now say that the greatest

curse that can befall the present renewal of the grape culture, would be the planting American vineyards with varieties of the Vitis vinifera. And is it not degrading to American intelligence, after all the experience of the past, to be still seeking out the puny and debilitated vines which France has been on the eve of rejecting for disease, when we can see every where implanted within our own boundaries, as the spontaneous gift of nature, ten distinct robust species of the grape, and varieties almost innumerable? Even the growth of seedlings from the foreign species ought to be repudiated, as the progeny has always proved feeble.

Yes! "Self-interest" I have in this matter, and that self-interest is a most ardent desire that we shall make no more ill-judged experiments, but that our future operations may be such as shall result in the glorious triumph of covering our hillsides and our valleys with prosperous vineyards, thereby not only furnishing to the whole nation that pure, gently exhilarating, and restorative beverage which constitutes one of the greatest boons God has bestowed on man, but which will also serve to eradicate the greatest vice of the nation. Intemperance is undeniably the most debasing parasite which afflicts humanity, and the grape culture is the sovereign and only means by which it can be eradicated. Man, in the performance of the ordinary duties of life, exhausts both the body and the mind, and then seeks some congenial restorative. Deprived of pure wine, he looks to alcohol, not from choice, but from necessity.

Is it not then the noblest pursuit in which we can engage, to develop the vineyard culture until every family in the nation can be cheaply supplied, and also until we can export the pure juice of the grape to every other country that requires it?

[However much cause Mr. Thomson may heretofore have had to except to Mr. Prince's allusions to himself, we think he will not complain of the tone of the present article. We are glad to see Mr. P. disclaim any personal ill-feeling; and we may add, that his reasons will have more force, because more temperate, but they are none the less decisive, as the reader will see. Many wanted to know the reason why Mr. Prince changed his opinion, and this will be the first time that most of them will have heard of it. We certainly have never heard of it before, to the best of our recollection, and never could account for the silence, but wished it might be broken. The impression has generally prevailed that Mr. Prince's opinion was originally based on an inspection of Mr. Thomson's vines, but his explanation puts another face on the matter. The subject is now in a way of being cleared up. Let us by all means have the other article, with your reasons for considering the Delaware a foreign grape: state the particulars in which the Delaware differs from the native vine, so that the points of comparison may be obvious. We agree with Mr. Prince, that no greater misfortune could befall the country than the planting of foreign vines for vineyard culture, and this is an additional reason for deciding speedily the origin and hardiness of the Delaware. We want all the testimony we can get on both sides of the question. Rev. Wm. P. Page was another of those who entered into the culture of the foreign vine at the time alluded to by Mr. Prince, and we have heard him state his losses at upwards of $20,000. We are all agreed that the foreign vine is not adapted to our climate: experience has settled that beyond dispute.—Ed.]

RUBUS LACINIATUS—"JAGGED-LEAVED BLACKBERRY."

BY WILLIAM LAWTON, OF NEW ROCHELLE, N. Y.

Having introduced a specimen of this fruit, together with the branches and leaves, at the late meeting of the American Pomological Society, held in Philadelphia, it may be proper to state what I know in relation to it. The origin of this plant appears to be unknown; it was found in the celebrated Botanic Garden at Berlin, and described by the German botanist Willdenow, in his enumeration of these plants, Berlin, 1811. In a catalogue of plants in the Jardin des Plants, Paris, 1802, four varieties appear, namely: *Rubus cæsius*, *R. fruticosus*, *R. scandens*, *R. saxatilis*. As it is not described in Miller's Botanical Dictionary, London, 1807, I conclude it was introduced into the Garden at Berlin subsequently to 1802; and it is very singular that the origin of a plant so beautiful, and with so many distinctive qualities, should be involved in obscurity, and the value and quality of its fruit remain almost unknown until the present time.

I find it in the catalogue of Wm. R. Prince, Flushing, 1844, as the "Parsley-leaved Blackberry—very curious," and in 1860, as "Parsley-leaved, or Late Prolific, large, sweet, aromatic flavor; ripens after Lawton; very productive, estimable, rare." To this description I would add, perfectly hardy, and does not cast its beautiful foliage until late in the winter. In Watson's "*Dendrologia Britannica*," London, 1825, a full botanical description may be found, with a colored plate of the plant and flower.

I am thus particular for the purpose of calling attention to this plant as a valuable addition to the amateur's fruit garden, and it may prove profitable to fruit-growers generally; but for the purpose of covering unsightly stone fences with beautiful foliage and sweet fruit, it will be invaluable. The berries are large, ripen nearly a month after the Lawton, and may be all gathered within two weeks; after which, as I have before stated, the trailing vines will retain their deep green foliage until winter. Mr. Thomas Hogg, of Yorkville, presented me with one dozen plants, which I put out in the open ground on 2d December, 1856; every plant survived the winter, and grew most rapidly the following season. In September, 1858, they produced a fine crop of fruit, and in the two succeeding years have been equally productive. In regard to the best method of cultivation, and some peculiarities of the plant, I may trouble you with another communication. The photograph I send to you may not be as perfect as you would require for your engraver, but from your knowledge of the fruit, and skill in delineation, I should hope you would be able to furnish it in your next number.

[The honor of introducing this Blackberry belongs to Mr. Charles Moré, of Yorkville, N. Y., who imported it from France in 1842. In 1843 he gave us three plants of it, the old stools of which are still in vigorous condition. In 1844 it appeared in Mr. Prince's Catalogue, and subsequently we sent it to some friends in Boston and elsewhere. Mr. Hogg got it at an early period from Mr. Moré, and Mr. Lawton, some years later, as stated above, received it from Mr. Hogg. Mr. Moré, in the mean time, had been propagating and selling it, and has continued to do so up to the present time, there always having been some demand for it. Mr. Munson, of Astoria, who made such a fine show of the fruit at the Farmer's Club this fall, procured his plants of Mr. Moré, and has propagated it largely, as has also Mr.

RUBUS LACINIATUS.

Hogg, Buchanan, Marx, etc. We first called public attention to it in Mr. Pardee's Strawberry Manual, published some years ago. The plant is quite ornamental, and deserves a place in the amateur's garden. It is well adapted for covering rock work and stone fences. When properly cultivated it yields a fair crop of fruit, juicy, very sweet, and of good flavor. It is a rampant grower, and if allowed to trail on the ground, will extend a distance of twenty feet or more. Its hooked thorns are a terror to all who approach it; we think nobody would attempt to scale a wall covered with it. Though its origin is not known, it is supposed to be a native of France. We shall be glad to have Mr. Lawton's article on its cultivation, to which we may probably add some suggestions of our own.—ED.]

IOWA PRAIRIE SKETCHES, NO. VI.

BY "MINNIE."

I HAVE just returned from a short walk, and while walking have been, as the preacher says, "looking for my text." I have examined but a small portion of one page of Nature's voluminous book, but oh, what gems of thought do I find written there! How shall I select any one of these, and describe its varied beauties? What hand, well skilled in art, can imitate, what pencil delineate these varied forms? What dyes can reproduce such rich hues as these? Or can Persian looms weave textures soft and curious as compose the petals and foliage of these plants? Nature, when thou dost work, all the race of man may look on and admire, and strive to imitate, but vain is the effort, impotent the skill, for thou, Nature, art but the pencil, the dye, the loom, the varied machinery by which *mind Supreme* paints, forms, creates for man, to lead his finite mind "through Nature up to Nature's God!"

Mr. Editor, could I but hold up before you and your many readers the promiscuous, hastily gathered, yet delicate and richly colored bouquet, which now lies before me, I might lay down my pen and say no more, for description is tame and dull, when the eye rests on the real object. But this I can not do; therefore I must classify, specify, describe, and when I have done, many will no doubt lay down the page and say, "Why here is but a little more, after all, than the common Golden Rod, Sun-flower, and Aster!" Well, the remark is true; for although the prairie is now thickly studded with floral gems, yet our autumnal flowers nearly all belong to the great natural order Compositæ, and the Genera Solidago, Helianthus, and Aster are the principal families to which these individuals belong.

But let us examine our bouquet a little. Here are nine species of the Aster tribe; take one of each, and arrange them in almost any careless manner that you may, then hold them back and look. Is there nothing here to admire? What say you to the soft, silky, pubescent foliage of the Aster sericeus, with its dark, slender, wire-like stem, supporting such a weight of bloom? to the A. multiflorus, with its masses of delicate, pearly-white flowrets, and its finely cut foliage? or to the A. Tradescanti, var. fragilis, with its graceful lilac-purple panicles? Is there no beauty in these? Compare with any one of them, the *most costly artificial* of the shops, for which you exchange your gold, and say, is the imitation any thing like as perfect, in form, outline, or coloring, as this which has sprung from the earth, and been

nourished by sunshine and shower? Nay, nothing like it, you on comparison admit. Ay, in the Aster family alone there are beauty and grace inimitable!

Let us look further. Of the Golden Rod, (Solidago.) I have four species, viz.: S. altissima, S. rigida, and S. Missouriensis, with their golden crests and nodding plumes, and the S. serotina, with fine, soft, dark colored leaves contrasting finely with its pale yellow umbel. Arrange them with several other species of the Solidago, according to their height, &c., in contrast with some dark foliaged evergreen in your grounds, and there, carefully nurtured, let them thrive and bloom, and in the autumn of a future year, tell me if you would willingly see them removed from your selected nook, to "bloom unseen" again on the broad wild prairie. Here is a Helianthus, with tall stalks and many branches full of bright yellow sun-flowers, which contributes its share of show and brightness to the autumn landscape.

Two of the Liatris family are also here, Liatris scariosa, most beautiful in the *bud*, and L. spicata, with its tall slender spike of bright violet purple flowers; and two of this family, L. pycnostachya, and the cylindrica, less stately than the former, but not less beautiful, have bloomed and perished with the summer days. The Liatris is, I believe, almost wholly *western*, but not unworthy a place in the cultivated grounds of eastern connoisseurs.

I have a thistle too, Cirsium Virginianum, the only species of thistle I have observed in Iowa, and from what I have seen of its habits, I do not suppose it is a very troublesome enemy to the agriculturist.

A few flowers not syngenesious are also here. The Lobelia siphylitica, "blue as an Italian sky," shaded and penciled with pearly white, with half-parted lips seems to say, Would you not like to have me live beside the little stream which flows from your fountain, and rippling through your grove, hides itself among the roots which drink its water? And there, by my side, I am sure my more showy sister, L. cardinalis, with her scarlet robe, would be a welcome guest, and oft attract your admiration.

Other beauties, Gentiana pneumonanthe, "deeply, darkly blue," and a variety of the same, rubricaulis, together with a pale cream-colored blossom of the labiates, (a stranger to which neither Eaton nor Wright, Wood nor Gray, has yet introduced me,) with a branch of seed pods of the Baptisia, completes the list of this wild garland.

How kind the hand which scatters so profusely all over this unbroken soil, such beautiful tokens of his loving care, thereby cheering and enlivening the hearts of the lonely settler's family for long years, in which he labors to inclose his land, tills, and builds, and provides food and comfort for his loved ones, before he could dare indulge in the luxury of a well-cultivated flower garden, greenhouse, &c., and for which—did not these fairies of spontaneous growth come in to fill the vacancy—the more refined portion, and especially the little ones, would look back with yearning hearts to the eastern homes they have, from various causes, been led to leave, and long for them as did the wandering Israelites for the flesh pots of Egypt.

REPORT OF THE CINCINNATI COMMITTEE ON GRAPES.

Just as we are finishing up our last form, the following report comes to hand from Mr. Mottier, who will please accept our thanks. It is a valuable document, coming from three of the most experienced vine-growers at the West, and will be read with deep interest. In view of the large sums which

are being yearly expended in the purchase of Delaware vines, it is a matter of the first importance that its character and hardiness should be speedily and definitively settled. We are desirous of having all reliable testimony on both sides of this question, so that it may be put beyond all reasonable dispute; we think it is already so. We have given our own opinion on this point, with the results of testimony collected from various sections of the country. The following is explicit, and to the point.

To the President of the Cincinnati Horticultural Society:

SIR:—The committee who were appointed to take into consideration the cultivation and general treatment of grapes suited to our locality, and to ascertain what is the most advantageous variety for our use, submit the following report. The growing interest taken in the cultivation of hardy grapes for wine and table use, seems to your committee to call for better and more systematic treatment for our vineyards than we have generally found them to have received.

A very erroneous system of pruning is generally practised; that is, too short summer pruning, or breaking the shoot off at one leaf after the last bunch of grapes, instead of leaving three or four leaves to nourish the grapes, and keep them in good growing and healthy condition. The result of this short pruning is, that a part of the grapes never ripen, from a deficiency of foliage; for if the vines are stopped too short, not only does this cause a deficiency of leaves, but it hastens the maturity of the wood, and thereby causes the falling of the leaves before the maturity of the fruit. After the leaves are off, the fruit makes no further improvement or ripening.

It is the opinion of your committee that grapes will undoubtedly pay better even than any other fruit or crops, if they receive good and proper cultivation; at least, we have found it so in our own practice, from an experience of thirty years.

In our visits we have found one vineyard which was managed in a manner deserving of high commendation. The same system of tying and summer pruning was practised in it as that which has been observed in the vineyard of the chairman of your committee. The results are such as to give unmingled satisfaction. In our visits we also found some promising new varieties of grapes. The Norton's Virginia Seedling, a dark-colored grape for red wine, is highly spoken of; but the Delaware stands at the head of all the hardy grapes, either for wine or the table. We have been watching the Delaware for three or four years very closely, and find that the vines stand the winter freezing and spring frosts better than the Catawba, equally exposed and unprotected. No rot or mildew has yet been discovered, and no falling of the leaves until the fruit is fully ripe; and it ripens fully three weeks earlier than the Catawba.

We have seven reasons why we place the Delaware at the head of the hardy grapes:

1st. Superior quality for table use. 2d. It produces finer and richer wine. 3d. The vine stands the winter freezing better than the Catawba. 4th. It stands the spring frosts better. 5th. The grapes never rot. 6th. No falling of the leaves until the grape is ripe. 7th. The certainty of their growing, and the general hardiness and healthiness of the vine.

The chairman of this committee has already planted twelve hundred Delaware vines with such success that he is preparing the ground for twelve hundred more in the spring. DR. S. MOSHER, R. BUCHANAN. J. E. MOTTIER, *Ch'n.*

EDITORS TABLE.

To Contributors and others.

Communications, Letters, Catalogues, Periodicals, &c., intended for the perusal of the Editor, and packages by Express, should be directed to the care of C. M. Saxton, 25 Park Row, New York. Exchanges should be addressed to "THE HORTICULTURIST."

A WORD TO OUR READERS.—This is the last number of the present volume, and it becomes necessary for our readers to renew their subscriptions; and we trust they will all do so, and send us some new names with their own. We have endeavored, in an humble way, to make the HORTICULTURIST a useful and practical publication, and we have been cheered by many kind and friendly words of encouragement. We shall endeavor to add greatly to its usefulness during the next year; an increased subscription list would enable our publishers to place increased facilities at our command, and we should make the best use of these for the benefit of our readers, who, in reality, would reap the chief benefits of such increase. We desire that the HORTICULTURIST should work its way and sustain itself on its own merits; but much as we wish to extend our circulation, we do not ask any body to stop another to take ours; for we believe that the poorest gardener would consult a wise economy by subscribing for and faithfully reading two or three of the best. We believe, further, that gentlemen employing gardeners would promote their own pecuniary interests and the welfare of their gardeners by presenting them with an annual subscription to two or three good magazines. While we have reason to be satisfied with the year that is past, we look forward to a "better time coming."

YALE AGRICULTURAL LECTURES.—It will be remembered with how much interest and satisfaction the Lectures at Yale College were received last winter. The beneficial results that they were universally acknowledged to have accomplished, has determined their continuance, and we bespeak for them the attention of our readers. We are indebted to the politeness of Professor Porter, one of the moving spirits in the enterprise, for being enabled thus early to state, that the Second Course will commence February 5th, 1861, and be continued throughout the month. These lectures are given under the auspices of the Yale Scientific School, a scientific department of Yale College, as a supplement to its newly instituted course of practical collegiate education. A new and important feature of this course will be the complete illustration of all the subjects presented, by specimens, drawings, models, and living animals. Life-sized paintings of groups from celebrated herds will be included in these illustrations. The lectures on the training and breaking of horses will be accompanied by practical exhibitions. The lecturers of last year will take part in this course, and other eminent names will be added to the list. Among other new subjects, the diseases of animals will be presented by a leading authority. The relation of various branches of Science to Agriculture will be discussed by Professors in the Scientific Department of Yale College. These lectures are repeated with no expectation of pecuniary return, but from a desire to furnish facilities of education to those who

are unable to avail themselves of the more extended practical courses of the Scientific School. Its large expenses will be met in part by voluntary contribution. For further information apply to Professor John A. Porter, Yale College, New Haven, Conn.

ROSE CHAMPION GERANIUM.—We have learned that Mr. Isaac Buchanan, of New York, has purchased the stock of this fine geranium, figured in our September number, and it will, of course, be sent out, as it should be.

FARFUGIUM GRANDE.—Much the largest and finest specimen of this ornamental-leaved plant that we have yet seen is in the grounds of Mr. Saxton at Orange. The leaves are some six inches in diameter, beautifully spotted with pale yellow. It has three very stout flower-stalks, but the flowers are destitute of beauty. It will be a very popular plant, if it proves to be quite hardy. Mr. Saxton purposed lifting it, but we have advised him to let it remain where it is, in order further to test its hardiness.

FIRE AT THE MESSRS. PARSONS.—We have learned, with deep regret, that the large propagating house of the Messrs. Parsons has been destroyed by fire, entailing the loss of a great many rare and costly plants, including most of their recent importations. Their loss is estimated at $5,000.

IONA ISLAND.—We recently paid a visit to this beautiful spot, and were kindly entertained by its genial and hospitable host and hostess. In our "Chapter of Visits" will be found some extended remarks of a former visit. We are more than ever impressed with Dr. Grant's immense facilities for the propagation of the grape: there is no other place to compare with it in this respect. *Fifty thousand* vines in pots, besides some *twenty thousand* in the ground, will give the reader some idea of what is done in the course of a single year, these all having been propagated during the past season; and they are remarkably fine, too. But one of our objects was to examine by request, the doctor's seedlings. Seven of these we found to be good enough to put on the "promising" list; and two of the seven were so decidedly superior and distinct that we put extra marks on them; there is no danger of confounding them with any grape at present cultivated. The names we gave them we withhold for the present. One other, of very early maturity, we think will take its place as the best of its class. We advised the doctor, however, to give them all a further trial, and not to risk his well-earned reputation on an uncertainty. Being a sensible man, he will, no doubt, follow such sensible advice. We shall not be surprised, however, if, one of these days, there issues from this classic-named island, the best native grape that has yet been given to the American public.

CORRECTIONS.—On p. 475, 8th line from the bottom, place a *period* after "developed," and a *comma* after "said."——In our article on the "New Grapes," we stated that we received one from Mr. Paxton. This gentleman brought us the grape, but it was from Mr. Merceron, which we did not understand at the time.——In "Fruit Received," the fine bunches of Isabellas, Catawbas, and Concords were from Mr. Moss, of Mossville, instead of Mr. Howard. The latter gentleman ought to have received a letter from us instead of a notice; but our cards got mixed, and both went wrong.——In Mr. Daniels' article on Parks, Hyde Park and Quatremère are spelled wrong; and there are one or two other errors in the same form, which went to press without being seen by us.

CENTRAL PARK.—Mr. Green will please accept our thanks for the "Third Annual Report of the Commissioners of the Central Park. 1860." We are now in the midst of its perusal.

OMISSIONS.—We are still compelled to omit Horticultural Societies, some Correspondence, &c., for want of room. Our printer is pretty ingenious, and can do some queer things, but he declares he can only get a certain amount of matter in each number, and we have to submit.

THE MINNESOTA FARMER AND GARDENER.—This is a new paper just started at St. Paul, and edited by Messrs. L. M. Ford and J. H. Stevens. It is a folio of eight pages, and published at $1 per annum. The first number gives promise of a practical and earnest paper, and we wish it abundant success.

THE NEW ENGLANDER.—The November number of this excellent quarterly contains an article, entitled "Hints about Farming," by Donald Mitchell, Esq. To say that it is in his best vein, is to say enough of it as a piece of composition. His views in the main are sound and comprehensive. On some points we differ from him, and to others we should give much greater prominence than he does. His chief point, however, that mere science, without experience and business capacity, is of little value, is one upon which too much stress can not be laid. The article deserves to be attentively read. We shall copy portions of it hereafter.

The subjects of his discourse are, the "Yale College Lectures" and "Our Farm of Four Acres;" but he does not seem to be aware that the latter has been republished here, and several thousand copies of it sold. The New Englander is published at New Haven, and edited by W. L. Kingsley.

FLOOR SKATES.—Having our attention arrested by some curious looking objects in a window in Broadway, we stepped in to examine them. They proved to be "Floor Skates," invented by Mr. Shaler. The engraving in our advertising columns gives a good idea of them. They are fitted with flexible rollers made of gutta percha, and may be run on a naked floor, or even a carpet or oil cloth. Mr. Vail, the agent, took us into the "skating room," where we saw a number of boys enjoying themselves greatly, gliding about with as much ease and facility as if they were on a pond of ice, cutting spread-eagles, back strokes, &c. These skates are a great help to those learning to skate, and to young ladies and children they afford the means of an exhilarating and healthful exercise at all times. We have a high opinion of their utility, and commend them to notice.

DEATH OF MR. GEO. C. THORBURN.—We have just received intelligence of the sudden death of Mr. Thorburn, but too late to learn the particulars for the present number. We shall give them in our next. The announcement of the death of one so universally beloved will send a pang to many a heart.

THE DAIRY FARMER.—This is another new monthly, and its name well explains its object. It is published monthly at Little Falls, Herkimer Co., N. Y., by Mr. A. W. Eaton. Price, 50 cents a year.

BALTIMORE PARK.—We have a copy of the proceedings which took place at the inauguration of the Baltimore Park, from which we shall hereafter make extracts. Our Baltimore friends have been fortunate in securing the services of Mr. Howard Daniels as Landscape Gardener. He has talent, and we have no doubt that in due time he will present the Baltimoreans a "thing of beauty."

AQUARIA.—Mr. Davis, of Fulton street, New York, probably having an inkling of our piscatorial propensities, has sent us a very beautiful aquarium, well stocked with fish and *tadpoles*. It is very tastefully made, and we are much pleased with it. An aquarium is a beautiful and instructive object, and should be in every house where there are children—no matter what their growth.

THE CUYAHOGA GRAPE.—We stated last month that we expected matured specimens of this grape. They came duly to hand, and even exceeded the expectations we had formed of it from the first sample received, which was not fully ripe. We have had a fine drawing made, which we expected to give in the present number as a wood cut, but have concluded to keep it for a *frontispiece* for our January number. We only say for the present that it will, in our opinion, take its place among our best native grapes, and our friends need have no hesitation in adding it to their list. It is an unmistakably fine grape.

THE EUREKA GRAPE.—A committee have in hand Mr. Prince's Eureka grape, and will report upon it in due time. We have seen it, but do not wish to anticipate the report of the Committee.

SEWING MACHINES.—We have one of Weed's patent (a new one) under examination, and purpose soon to go over this ground for the benefit of our readers. Horticulturists are as much entitled to labor-saving machinery as any body else.

MORE ABOUT BOILERS.—*Mr. Editor*,—My attention has just been called to an article in the July number of the HORTICULTURIST, with the above heading, in which the heating apparatus put in for me by Wethered & Cherevoy is so accurately described by your correspondent "B." that I am satisfied beyond doubt that my place is referred to, as there is nothing else in Brooklyn approaching his description. The writer "B." goes on to say, that, though my greenhouses are so loosely built as to do injustice to any mode of heating, (they are substantially built of brick, and nearly new,) yet, nevertheless, the heating arrangements of W. & C. were so satisfactory that I "kept up a *high* temperature in times that tried men's souls," and that I "said" that when I had trimmed my lamp at night, I had no occasion to look out again till morning. I wish I could endorse this gratuitous "saying" of "B." But the facts are, Mr. Editor, that I was compelled to stay up nightly until midnight in cold weather, while my man had to be on hand at 5 in the morning to keep my plants from freezing, the thermometer being often in one house at 38°, and in the other at 42°.

The gentleman "B." also states the exact quantity of coal burned by me—"eight tons"—from November to May. Another gratuitous assertion, put in to keep up consistency in his "story." How he or any one else could know the exact quantity would be difficult to imagine, as there were three other fires supplied from the same pile. *My* impression was, that we burned nearly double that quantity; but possibly "B." knows better.

Now, Mr. Editor, the article in question was supplied by your correspondent "B." in response to a call from another correspondent for "facts and figures." What liberties he has taken with the "facts and figures" of the heating apparatus of my place, the above correct statement of the case will show, which, should he attempt to question, let him sign his name, and your readers can then judge between him and

JAMES H. PARK, Florist, Brooklyn, L. I.

[Very good, James, and outspoken enough; but it only makes the case worse for you, for it is manifest, on your own showing, that you have not read (and probably not seen) the HORTICULTURIST from July to the 6th of November inclusive! No wonder you burn sixteen tons of coal, and have to sit up till midnight freezing at that. You know that we have always been your good friend, but it serves you right, James; and we fear we shall not pity you if Jack Frost teases the life out of you the coming winter—unless you read the HORTICULTURIST, in which case we can promise you sound and refreshing sleep, at least so far as your greenhouses are concerned. Never again let any body "call your attention" to what is said in these pages, but resolve from this moment that you will know all for yourself. But this between ourselves. Now, "B.," what have you to say in response to Mr. Park's "facts and figures," which seem seriously to impeach yours, unless he is on the wrong track?—ED.]

CATALOGUES, &c., RECEIVED.

Descriptive Catalogue of Fruit and Ornamental Trees, Shrubs, Vines, and Roses, cultivated and for sale at the Commercial Garden and Nursery of Parsons & Co., Flushing, L. I., near New York.—One of the best classified catalogues we have seen, with quite a number of novelties.

Price List of Fruit Trees, Grape Vines, Flowering Shrubs, &c., Philipsburgh Nursery, Warren County, N. J. Charles Davis, Jr., Proprietor.

Catalogue of Foreign and Native Grape Vines, for Gardens, Graperies, and Vineyards. Autumn of 1860 and Spring of 1861. Wm. R. Prince & Co., Linnæan Botanic Gardens and Nurseries, Flushing, near New York. Forty-fifth edition.—In this new edition Mr. Prince has classified grapes under three heads, viz.: Foreign Grapes, American Indigenous Grapes, and American Hybrids and Seedlings of Foreign Varieties.

Descriptive Catalogue of Vines, &c., cultivated and for sale by D. S. Heffron, Utica, N. Y. —A fine collection, embracing all Dr. Grant's.

Wholesale Catalogue of the Brooklyn Nurseries, Brooklyn, L. I. Andrew S. Fuller, Superintendent, (Agent for Dr. Grant.)—Select, choice, and reasonable.

Descriptive Catalogue of a Selection of Roses, cultivated and for sale by John Saul, Washington, D. C., Nurseryman, Seed-grower, and Importer.—A choice collection of these beautiful objects.

Wholesale Catalogue of Fruit, Evergreen, and Ornamental Trees, Shrubs, Stocks, Roses, Bulbs, &c., for the Autumn of 1860 and Spring of 1861, offered for sale by John Saul, Washington, D. C.

Supplement to the Descriptive Catalogue of Fruit and Ornamental Trees, Shrubs, Seedlings, Roses, Camellias, cultivated at André Leroy's Nurseries, near the Railroad Station at Angers, France.—Embraces an immense collection of roses. The agents in New York are Messrs. Bruquière and Shebaud, 51 Cedar street.

Wholesale Catalogue of Parsons & Co., Flushing, near New York, for the Autumn of 1860.—Especially noteworthy in the ornamental department.

Annual Catalogue of Trees, cultivated at Gloaming Nursery, 1859 and 1860, Clarksville, Habersham County, Ga., by Jarvis Van Buren.

Cattle Disease. Report of the Commissioner to the Governor of Illinois.—A very interesting report by Mr. McFarland, embracing many interesting particulars of the Cattle Disease, brought to light by the Committee at Boston.

Descriptive Catalogue of Fruit and Ornamental Trees and Plants, cultivated and for sale by Carew Sanders & Co., at the St. Louis Nurseries, situated on the Olive Street Road, five miles west of the Court-House, St. Louis, Mo.—A very good miscellaneous collection of fruits and plants.

Select Descriptive Catalogue of Fruit and Ornamental Trees, Shrubs, Roses, &c., cultivated at the Kentucky Nurseries, Maysville, Ky. George G. Curtis & Co., Proprietors.—Full of choice things: the descriptions are particularly good.

The Pioneer and Monthly Record, devoted to the Industrial Interests, the True, the Beauful, and the Good. September, 1860. No. 1.—This is intended as the organ of the Rensselaer County Agricultural and Manufacturers' Society, one of the most useful institutions in the country. The present number is filled with useful matter, and gives promise of doing much good.

The Illustrated Annual Register of Rural Affairs and Cultivator Almanac, for the Year 1861, &c. By J. J. Thomas, Author of "American Fruit Culturist," &c., &c.—This little annual has become almost indispensable. The present is one of the best yet published. It is well printed, handsomely illustrated, and full of just such matter as is most needed by all engaged in rural affairs. It is published in Albany by Luther Tucker & Son, 397 Broadway, and in New York by Saxton & Barker, 25 Park Row. Price 25 cents.

FRUIT GROWERS' SOCIETY OF WESTERN NEW YORK.

(*Report concluded from p. 552.*)

J. C. MAXWELL, of Ontario County, spoke of his own cultivation being upon a rather heavy soil, and he had found the trees to grow well, and so does the fruit. Agreed with Mr. Barry;

and did not think the same opinions could be better expressed than had been done by Mr. Barry.

F. W. LAY, of Monroe County, has an orchard of three-year-old trees, which he planted where the long rows of trees ran through mixed soils, and much varied in running from one soil to another. Desired to add Belle Lucrative to the sorts valuable on quince. Bartlett succeeds well wherever well cultivated. Flemish Beauty also.

Mr. MOODY spoke of the comparative liability of standards to suffer from blight; but he thought them not so liable to blight upon light soils. Upon my place in Niagara County, have never seen a standard tree with fire-blight, nor have I ever had a cracked Vergouleuse. As to Mr. Barry's soil, I would not call that a very light soil; it is a mixture, a part of which sticks to the boots of those walking through it after a heavy rain: should call it a clayey loam. My standard Vergouleuse, which have been so successful on my loose, porous soil, are now over ten years old, and have been bearing fine crops for five or six years. In our county it cracks badly upon a heavy soil with hard and retentive subsoil, not underdrained.

Mr. LANGWORTHY thought, that in the cultivation of pears for profit it is desirable for the varieties to have a succession of ripening periods, which should not interfere with each other, nor with peaches. They would then be profitable; and, not being in competition with each other, nor with other fruits, would bring good prices in the market. On my soil, before described, Vergouleuse does not either crack its fruit or blight the trees; have not one case of tree blight.

GEO. ELLWANGER, of Monroe County, says that the Vergouleuse fruit has never been as large in our grounds as this year, both upon standard trees and on dwarf trees. The fruit, however, is larger upon standards trained as pyramids than on dwarfs. Considers it more liable to crack upon a very light soil, than where they have a heavy, clayey subsoil.

JOSEPH HARRIS, Esq., had, in a late visit to Wayne County, seen, at Newark, an orchard of ten thousand dwarf pear-trees and two thousand standards. It stood upon a side hill, sandy at top with clay subsoil; lower down the soils were more mixed, and became a heavy loam. Vergouleuse there cracked badly; worse upon the sandy than upon the heavier soil. The dwarf trees were double-worked, and Louise Bonne is fine, Bartlett very fine, and Flemish Beauty splendid. The farmer, seeing that there were considerable spaces between the trees, which were not crowded with vegetation, tried the experiment of growing a crop of rye in the orchard; and although he plowed it under as a green crop, it seemed to make the Vergouleuse worse, and to add one more to the many proofs that we can not grow two crops on the same ground, and must not cultivate any other crop in our orchards if we want the very best fruit.

B. L. HOAG, of Niagara County.—Have looked carefully at this matter of the Vergouleuse; and from all that I have seen should say, that it cracks less in light than in heavy soils. Knew one orchard of standards, planted in a clayey soil, which, although easily drained, had produced hardly a perfect specimen in the whole orchard. In a location not fifty rods distant, upon soil a little heavier, this fruit was badly spotted; while upon a sandy portion of this same orchard, it was not cracked at all. The dwarf Vergouleuse did not spot as badly as the standards. Would confirm what Mr. Lay has said. Belle Lucrative is a most splendid pear. What Mr. Barry says, as to good cultivation, but not too rich soil, is exactly my experience. Once saw a man who wanted to have his trees grow finely, put a wagon-load of manure around each tree, enough to kill any tree, and then complain that dwarf pear-trees would not succeed well with him.

Mr. BARRY here again remarked, in regard to the differences in soils, his land is a sandy loam, and the variations in the different parts of the plantation are, where the clay or the sand predominates. Sandy soils are very fertile; but the pear will not hold out in them for more than eight or ten years. The pear needs a good loam.

It is not safe to draw conclusions from one or two cases as to the causes of Vergouleuse cracking or spotting. Two years ago, the only place where it was found was the heavy soil. Thinks the spotting upon the fruit is a fungous growth, depending upon atmospheric causes. Last year

our Vergouleuse did not crack at all, but spotted badly. These spots developed their fungous growth in the barrels, while on the way to market; and the fruit was worthless on reaching its destination.

The Vergouleuse is fairer because of its ripening at a time when few competing fruits are in market, and there is a great demand for fine specimens.

Mr. ELLWANGER spoke of Stevens's Genesee Pear as being this year extremely fine; stating that for market no variety will bring a higher price, when well grown and well ripened. It is a truly beautiful fruit, although its flavor is perhaps not quite so fine as the Bartlett. Spoke of the Vicar of Winkfield as being variable in the character of the fruit, according to the seasons. It has one desirability, that of durability upon the quince stock, keeping up its vigor well. Our trees twelve to fifteen years old, bear annually very fine crops. The American Pomological Society, which had previously placed the Vicar on the rejected list because it rotted at the core before ripe, has this year taken it from that list.

Mr. HOAG spoke of Stevens's Genesee as having done very well indeed this season. The fruit seemed sometimes a little variable; but that was because of the too late picking. It should be picked early, as soon as it gives indications of a change in color.

GRAPES.—Which among the new hardy varieties have proved to be adapted to our climate?

P. BARRY thought more highly of the Delaware this year than ever before. In favorable situations and under good treatment, it is very fruitful. It is not hard of cultivation; and it is a fine, truly hardy, open air grape. We had one vine on the east end of our house, where justice was not done to it, as to soil, and yet it has made a very fine growth. The vine is only three years old; and yet it has borne quite a large crop this year upon the old wood. The shoots of this year are long, strong, and well ripened. In our open vineyard, the wood has not yet (Sept. 25) ripened up as well. Requires good treatment to ripen up the wood well; but when well ripened, nothing can be finer. Our Delaware fruit was ripe enough to eat two weeks ago. Has also cultivated the Hartford Prolific to a considerable extent, and is quite well pleased with it. The bunches have been generally complained of as very loose; but with us they are reasonably compact, and the berries are sweet and good. It is much better in our grounds than I have seen it elsewhere; seeming to be a vigorous vine, a strong grower, with most luxuriant foliage, and well deserving its name of Prolific. With us it grows tied up to stakes, upon the south side of one of our hills, and in the basin at the bottom, where the wash from the hills has made the soil rich and nice.

The *Concord*, also, with Mr. Barry, ripens perfectly every year, and under all exposures is a very hardy vine. On stakes in our open vineyard, the fruit is getting quite ripe, far riper than the Isabella.

The *Diana*, with Mr. Barry, is one of our most valuable grapes. When young, the vine is a healthy, strong, and a thrifty grower; and it bears fruit well when it acquires age. The Diana is certainly a variety which we can always rely upon here, under ordinarily good treatment.

The *Rebecca* has commonly been called a delicate grape, except under particular treatment; for instance, trained upon a wall. In my opinion, no American grape equals it in high flavor; although the bunches are small. Although not a grape for a northern vineyard—not for extensive cultivation in this latitude—it will be found a very valuable garden grape.

H. E. HOOKER, of Monroe County.—Rebecca with me has not grown well enough. It does not make very strong wood upon my place; and the foliage sunburns. Am cultivating the Delaware, both upon an open trellis and trained upon the south side of a building. Have found very few days' difference between the Hartford Prolific and the Delaware as to the time of ripening. Hartford Prolific is not nearly as good a grape as the Delaware; yet in size of the fruit and vigor of growth, I esteem it highly. While there are few gardens which have grapes as early as people desire, this sort is sure to ripen, and to be as good as the Isabella at a time when the Isabella

is not yet colored. Hartford Prolific is an earlier grape than the Concord; and so is the Delaware an earlier variety. I think that this Delaware is our very best grape. I have uniformly found it very productive. With fair culture it fruits well, and is a fine, sizable grape; while for home use the Delaware is, beyond comparison, better than the Concord.

Concord and Diana, with me, ripen up their fruit together; and this Diana is a fine, sweet, showy grape, and uniformly hardy.

As to which among the new hardy grapes I would recommend, I say Hartford Prolific, Concord, Diana, and above all the Delaware. The Delaware with me is entirely and perfectly hardy: even the lateral shoots are hardy; and no part of a well cultivated vine is ever killed back. For training on a trellis, I would recommend planting the Delaware; would advise every man who owns a square yard of ground to plant a Delaware grape-vine; because the taste for Delaware would excite a demand for the delicious fruit, and get great prices. I mentioned the Hartford Prolific because it is our earliest good grape, and gets used up quick.

Mr. CRAINE, of Niagara County, had two Delaware grape-vines planted out in his grounds, one against the east end of his house, and the other trained upon an open trellis; thus having an exposure the same as vines in a vineyard. The third year, has a good growth of wood, and we have seventy-five fine clusters of most delicious fruit, which ripened up early and well. Should not hesitate a single moment in planting the Delaware upon a larger scale than any other grape. Have cultivated the Hartford Prolific grape for four or five years, and can most fully indorse what Mr. Barry has said. It certainly ripens four weeks earlier than Isabella, and sometimes more. On 1st September, nearly a month ago, it was as ripe as Isabella usually is on 10th October. Allowed his Rebecca vines to remain all winter tied to a stake, as grown in summer; and this spring found that even the terminal bud was sound, so sound that we used the last bud for propagation.

Mr. HOOKER remarked that it was the roots of the Rebecca, and not the tops, which suffered from winter sometimes; and it required a little extra covering or protection to the roots to keep them from the effects of frost in the ground. The wood of Rebecca vine is always hardy as to the frosts of winter; but the summer's sun is apt to burn the leaves. As to Delaware, Mr. Hooker had noticed, when last at the Hudson River, a short time ago, that those who had had the most experience as to the merits of the Delaware, were now preparing to plant this variety very extensively. One man will plant out 2,500 or 3,000 Delaware vines immediately, confidently believing them to be the most profitable grape that he can grow for the New York market. Delaware is certainly an uncommonly productive grape.

Mr. LANGWORTHY here rose, and remarked that in his neighborhood Delaware is obtaining great notoriety. Some planters think they must have all Delaware to set out; and it is truly a most delicious grape.

Mr. HOOKER continued—Don't for market grow all of one sort of grapes, nor all one kind of pears, nor all one kind of peaches. By all means grow a variety of fruits. Every planter wants Delaware; and he wants Concord as well. He wants the very earliest fruit; and he wants the Diana as well, which is early, and ripens surely, but not quite so early as Hartford Prolific.

Mr. ELLWANGER—There is one thing in the Delaware that must not be overlooked, and which is very much in its favor: if not wanted for eating, nor for market, it will make a good wine; and it always ripens.

Mr. MOODY said, that the grape was the fruit of all fruits, which entered into most general consumption; but its greatest use, in my opinion, in this country is for wine. We want a grape that will make wine. We buy an immense quantity of wine, or of what is called wine, from abroad. Some people are particular as to what they drink, but nobody that I have ever seen, has been so conscientious that he wouldn't drink good native wine. We want a grape sweet enough to make wine without the addition of any sugar to the juice; and having found such a

grape, we can not raise too many of them in this country. Diana, also, will beyond doubt make a fine wine; for it is sweet. There is not any of that fibre which is in the most of our native grapes, and which when pressed is very sour, and needs sugar. In my opinion Diana and Delaware are the only two grapes which will here make a really fine wine. They are strong growers, with short-jointed wood, which ripens perfectly; they are early and abundant bearers; and their fruit will hang upon the vines for a long time after ripening. The frost does not injure the fruit, when fully ripe.

Mr. ELLWANGER here spoke of the Delaware as sure to ripen about the middle of September; and that then it could be left to hang upon the vine until the middle of October, if not needed sooner. In Europe, the vintners leave the grapes to hang as long as possible; and the longer they hang, the more saccharine matter they have in them. As to the quality of early ripening, the earlier the grape matures, the more you can depend upon it, provided it will hang upon the bunch well, and then you are perfectly sure of having your grapes ripened.

Mr. LANGWORTHY also said that Mr. Moody was on the right track in his strong commendations of the Diana and the Delaware grapes. They are certainly good enough for the eating of any fruit-lover; and then, when not needed for consumption upon the table, they possess the very important attribute of making a wine which is a good wine, a fine-flavored, palatable wine, and a wine sweet enough without any sugar.

Mr. BARRY had drunk Delaware wine in Cincinnati; and he could confidently say that it was the best American wine he had ever tasted; far better than the best Catawba, better than any foreign wine that he ever saw or put his lips to.

Mr. CRAINE thought that the Delaware was more prolific than even that splendid grape, the Diana, under the same treatment.

Mr. HOPKINS, of Tompkins County, had had considerable experience with the Delaware vines and fruit, last summer and last fall. The Delaware is now largely grown in New Jersey; and in every place where I have found it, it is valued very highly indeed—is valued above any grape they have ever seen. In the northern part of New Jersey, where the winters are as cold and as variable as they are here, and where gardeners do not give it the least kind of protection, the Delaware sustains itself better than the Isabella does under the same exposure. Judging from the fact that upon the higher grounds in the colder parts of New Jersey the Delaware vines have done so remarkably well, I assure cultivators that in Western New York it will do as well as any other grape-vine, and will produce as many pounds of fruit to the vine as any other kind can. Its sterling good qualities can be best realized from its being flatteringly called the *Italian wine grape*, by some natives of Italy who saw it in the grounds of Judge Provost, at Kingswood, New Jersey. It has one valuable quality, wherein it is different from any other of our native grapes, except the Diana; and that is, that as soon as it begins to be colored it is sweet, it is good.

Mr. MOODY here begged to remark, that in his experience the Diana had been fully as productive as the Delaware, and an early bearer also.

Mr. CRAINE repeated his opinion as to the Delaware. Vines this year had made canes twelve and fifteen feet in length; and he thought that a Delaware plant in its third year's growth, would bear more fruit under the same treatment than even the Diana. Mr. Craine admired both grapes very much, but thought it his duty to commend the Delaware as he had already done.

Mr. HOAG was in favor of having a regular succession of grapes, in about an equal proportion of the varieties, as much so as we have successions of any other fruit. If this be properly attended to, we can have and enjoy the luxury of the grape as long as we can the apple—for at least six months steady. Would speak of a variety called Garrigues, which ripens at least ten days earlier than Isabella. Has grown it side by side with Isabella; and Garrigues is more hardy; maturing its fruit early, while Isabella rots. Although the flavor or quality may not be quite equal to that of Isabella, still it is very hardy and exceedingly productive.

Mr. ELLWANGER.—As a rule, the grapes that ripen early are the kinds that keep best. A very great objection to the Isabella for wine is, that in the manufacture of Isabella wine we must add sugar. Mr. Longworth, of Cincinnati, whose name is so allied with the celebrated Catawba wine, said to Mr. Ellwanger that a sample of wine from the Delaware grape was the best wine he ever made; possessed more body, was a heavier wine and a better wine than any other that he had. From his experience with Delaware, Mr. Longworth liked it very well so far. About Cincinnati, the Delaware vine does not require manuring highly; but it requires deep culture of the soil, such culture as would produce good crops of corn. The reason for deep culture is, that if the land be with a clayey subsoil underlaid with limestone, and the clay be compact, the roots can not penetrate it, and the subsoil needs working up.

Mr. HOOKER approved of deep culture. In Monroe County, high manuring is not necessary to the successful growth of grapes. Too much manuring is done, too much stimulus is applied, and the ground not deep enough worked. Mr. Barry spoke of cultivators as all being too anxious to get fruit immediately, and to have it ripen up all at once. The ground for planting the vine should in all cases be thoroughly prepared; and deep working is one of the requisites. To be sure, the roots may go down into the cold subsoil; but we are not working for one year merely, but for a whole generation. People are too impatient for fruit from their plantings; they grumble because their pear-trees do not fruit soon after setting out; and the Northern Spy apple, which is now so popular and highly esteemed, used to be blamed for its late bearing. In planting the vine, they use in Europe at first no manure. They trench the ground and plant the vines, and afterward manure upon the surface of the ground. For a permanent vineyard, the land should be subsoiled at least twenty inches deep. While doing so, you do not necessarily throw the subsoil on the top of the other soil, but depending a good deal upon the character of the subsoil. If the land be worked deep, the roots of the vines are not so liable to be killed by the winters From the experience which fruit-growers have had during the twelve months past, we are more positive in regard to the qualities of grapes than we were a year ago.

Mr. MAXWELL, of Ontario County, spoke of Allen's Hybrid grape as a white fruit which, in a private garden in Geneva, had done very well, and promises well.

Mr. HOAG here spoke of the Logan, a very early black grape, and said that he should consider it a very good grape. Several members called on Mr. Bissell to state as to the Logan; and he remarked that untoward circumstances had prevented his fruiting the Logan this year, but that a quantity of the fruit was sent to him from Mr. Thomson, on 20th August; and all who ate it liked it very much.

Mr. ELLWANGER—When at Philadelphia lately had made inquiries of gentlemen from the West; and they did not express a very favorable opinion of it.

Mr. HOAG spoke of the To Kalon, which he would pronounce a better grape than the Isabella, especially for family use, for cultivation in gardens, &c.; and in this Mr. Hooker joined, pronouncing it a grape of fine quality, with a flavor truly delicious, and in size larger than the Isabella; the fruit when fine is very fine. The *Union Village* grape has created quite a sensation at the East, on account of its size.

Mr. ELLWANGER spoke of the Union Village from his own experience, having fruited it for the past two years; and in flavor it is fully as good as the Isabella, while the vine is perfectly hardy, and surely is among the varieties which are promising well.

D. W. BEADLE, of Canada, spoke of the Ontario grape; and some other sorts were mentioned; but the discussion consisted mainly of question and answer among the members, of which our reporter did not take accurate notes. We regret this the more as it was very interesting to those present, and would have been so to our readers.

The next meeting of the Society will be held in Rochester in January, when we hope to have an abstract of the proceedings sent to us.